

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

**FORM 10-K**

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

**For the fiscal year ended December 31, 2019**

**Commission File Number 001-14962**



**CIRCOR INTERNATIONAL, INC.**  
(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction  
of incorporation or organization)

**001-14962**  
(Commission File Number)

**04-3477276**  
(I.R.S. Employer  
Identification No.)

**30 CORPORATE DRIVE, SUITE 200**  
**Burlington, MA**  
(Address of principal executive offices and Zip Code)

**01803-4238**  
(Zip Code)

**(781) 270-1200**  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12 (b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	CIR	New York Stock Exchange

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

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, a 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>	Emerging growth company	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>		

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. Yes ☐ No ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of voting stock held by non-affiliates of the registrant as of June 30, 2019 was \$887,999,502. The registrant does not have any non-voting common equity.

As of March 2, 2020, there were 19,920,230 shares of the registrant's Common Stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Part III incorporates by reference certain portions of the information from the registrant's definitive Proxy Statement for the 2020 Annual Meeting of Stockholders to be held on May 7, 2020. The definitive Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the close of the registrant's year ended December 31, 2019.

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## Part I

### Item 1. Business

*This Annual Report on Form 10-K contains certain statements that are “forward-looking statements” as that term is defined under the Private Securities Litigation Reform Act of 1995 (the “Act”). The words “may,” “hope,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “potential,” “continue,” and other expressions which are predictions of or indicate future events and trends and which do not relate to historical matters, identify forward-looking statements. We believe that it is important to communicate our future expectations to our stockholders, and we, therefore, make forward-looking statements in reliance upon the safe harbor provisions of the Act. However, there may be events in the future that we are not able to accurately predict or control and our actual results may differ materially from the expectations we describe in our forward-looking statements. Forward-looking statements, including statements about our future performance, including realization of cost reductions from restructuring activities and expected synergies, involve known and unknown risks, uncertainties and other factors, which may cause our actual results, performance or achievements to differ materially from anticipated future results, performance or achievements expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, changes in the price of and demand for oil and gas in both domestic and international markets, our ability to successfully integrate acquired businesses, as contemplated, our ability to successfully implement our divestiture, restructuring or simplification strategies, the possibility that expected benefits related to the Fluid Handling acquisition may not materialize as expected, any adverse changes in governmental policies, variability of raw material and component pricing, changes in our suppliers’ performance, fluctuations in foreign currency exchange rates, changes in tariffs or other taxes related to doing business internationally, our ability to hire and retain key personnel, our ability to operate our manufacturing facilities at efficient levels including our ability to prevent cost overruns and reduce costs, our ability to generate increased cash by reducing our working capital, our prevention of the accumulation of excess inventory, fluctuations in interest rates, our ability to successfully defend product liability actions, any actions of stockholders or others in response to the expiration of the recent unsolicited tender offer and the cost and disruption of responding to those actions, as well as the uncertainty associated with the current worldwide economic conditions and the continuing impact on economic and financial conditions in the United States and around the world, including as a result of health pandemics, natural disasters, terrorist attacks, current Middle Eastern conflicts and related matters. For a discussion of these risks, uncertainties and other factors, see Item 1A, “Risk Factors” in this Annual Report on Form 10-K. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.*

#### Overview

CIRCOR International, Inc. was incorporated under the laws of Delaware on July 1, 1999. As used in this report, the terms “we,” “us,” “our,” the “Company” and “CIRCOR” mean CIRCOR International, Inc. and its subsidiaries (unless the context indicates another meaning). The term “common stock” means our common stock, par value \$0.01 per share.

We design, manufacture and market differentiated technology products and sub-systems for markets including industrial, aerospace and defense, and energy. CIRCOR has a diversified flow and motion control product portfolio with recognized, market-leading brands that fulfill its customers’ mission critical needs. The Company’s strategy is to grow organically and through complementary acquisitions; simplify CIRCOR’s operations, including through dispositions of non-core assets; achieve world class operational excellence; and attract and retain top industry talent. We have a global presence and operate 25 major manufacturing facilities that are located in North America, Western Europe, Morocco, and India. The Company has the following reportable business segments: Industrial (“Industrial segment”), Aerospace & Defense (“Aerospace & Defense segment”), and Energy (“Energy segment” or “Energy”). We sell our products through distributors, representatives, Engineering, Procurement and Construction (“EPC”) companies, as well as directly to end-user customers and original equipment manufacturers (“OEMs”).

In 2019, we completed the divestiture of our Engineered Valves (“EV”) business and announced our intent to sell our Distributed Valves (“DV”) business. These actions stemmed from our decision to exit the upstream oil and gas valves market, which was a strategic shift for the Company. As a result, these businesses are both accounted for as discontinued operations in our consolidated financial statements. The following discussion in this Item 1 relates only to our continuing operations unless otherwise noted. Refer to Note 1, Description of Business along with Note 3, Discontinued Operations and Assets Held for Sale, to the consolidated financial statements included in this Annual Report for additional information.

## Strategies

Our objective is to enhance shareholder value by focusing on growth, margin expansion, strong free cash flow, and disciplined capital deployment. We have a four-point strategy to achieve these objectives.

1) *Grow Organically and Through Acquisitions.* We leverage the power of our global design capabilities to develop innovative products that solve our customers' most challenging and critical problems. New products will be an increasingly important part of our growth strategy going forward. In addition, we are positioning ourselves to grow in parts of our end markets where our products are under-represented. This could include establishing a presence in higher growth geographies where we have a limited presence today. It also could include taking products established in one end-market and selling those solutions into other relevant end markets.

In addition to organic growth, we expect to acquire businesses over time. We are primarily focused on companies with differentiated technologies in complementary markets that we already understand and where we expect substantial growth. In addition to strategic fit and differentiated technology, the main criterion for an acquisition is return on invested capital.

2) *Simplify CIRCOR.* In 2013, we embarked on a long-term journey to simplify CIRCOR. We have a large number of facilities relative to our size and believe that simplifying this structure will not only expand our margins by reducing cost, but will help us improve our customer service, operations, and controls. We obtain an in depth understanding of our customer needs and competitor capabilities in our end markets, and continue to simplify our product portfolio and the number of unique products we offer in the marketplace through active product management. During 2019, our simplification strategy shifted to include the exit of upstream oil and gas businesses.

3) *Achieve World Class Operational Excellence.* Our Global Operations and Supply Chain organization is fully committed to achieving operational excellence in support of our customers' expectations of perfect quality, on-time delivery and market competitiveness. We follow the CIRCOR Operating System ("COS") which creates a disciplined culture of continuous improvement for driving operational excellence including a sales and inventory operations plan that provides for world-class quality and delivery while maintaining an optimal level of working capital. COS is comprised of ten business process attributes designed to engage and empower our employees to recognize and eliminate waste, work real-time problem solving as part of their everyday job experience, and enhance our performance both in operations and business office processes. Under the COS, our employees participate in a regimented training program and receive regular prescriptive assessments / action plans to drive process maturity. Quantitative performance metrics define site certification levels to help attain and sustain a level of quality, productivity, inventory management and market competitiveness that delights our customers, shareholders, and employees.

4) *Build the Best Team.* Finally, we have a fundamental belief at CIRCOR that the best team wins. We are committed to attracting the most talented people in our industry and we are committed to investing, engaging, challenging and developing our employees. We believe the best people combined with robust process, appropriate metrics, and individual accountability will deliver extraordinary results.

## Business Segments

### Industrial

Industrial is a global portfolio of highly engineered and differentiated fluid handling and flow control products. Our primary products are positive displacement pumps, specialty centrifugal pumps, automatic recirculating valves, control valves, and harsh environment flow control products for steam and cryogenic applications.

Our technology is focused on moving the most difficult fluids with extremely high efficiency for critical applications in the general industrial, power, process, oil & gas, and commercial marine end markets.

We plan to grow the Industrial segment by expanding our share in existing markets with innovative solutions and new product offerings through our strong sales and service network, and leveraging our brand and commercial position.

Industrial is headquartered in Radolfzell, Germany, with primary manufacturing centers in North America, Germany, India, and China.

### *Markets and Applications*

Industrial serves the general industrial, commercial marine, oil & gas, and power and process markets.

- The general industrial market includes a broad range of manufacturing operations for flow and energy control. Our products are used to handle viscous and critical fluids, automate and control plant utilities, increase energy efficiency in buildings and campuses, and safely regulate critical fluids such as industrial gases and cryogenic fluids used in manufacturing processes.
- The power and process market is comprised of electric utilities, industrial power producers, and OEM power generating equipment providers. Our products and services are used across this segment in lubrication management for turbines and generators, as well as fuel delivery, heat transfer, and emissions reduction applications. We serve power generation facilities and processes fueled by natural gas, oil, hydro, solar, nuclear, and coal.
- The oil & gas market is divided into three sub-segments: upstream, midstream, and downstream. In midstream, our products are used in the transfer of oils and refined products via pipelines, ship vessels, railcars, and trucks. Our products and services are also used to manage and maintain storage terminals. In downstream, our products are used to support critical refining processes, both directly in the process and as part of integrated equipment supplied by OEMs. In 2019, we initiated a strategic shift away from upstream.
- The commercial marine market includes shipbuilders, OEM suppliers of onboard equipment, and shipping fleet operators. Our products and services are designed specifically to support all aspects of fluid systems, including propulsion, ballast handling, cooling water, bilge, fuel, power generation, and mechanical hydraulics.
- In all of the markets we serve, we provide aftermarket components and, in limited applications, aftermarket services.

### *Brands*

Industrial manufactures and markets products and services through the following brands:

Allweiler, Houttuin, IMO Pump, IMO AB, Leslie Controls, CPC Cryolab RG Lawrence, Rockwood Swendemann, RTK, Schroedahl, Tushaco, and Zenith.

### *Products*

Industrial offers a range of fluid handling products and services, including:

- 3 Screw Pumps
- 2 Screw Pumps
- Progressing Cavity Pumps
- Specialty Centrifugal Pumps
- Gear Metering Pumps
- Automatic Recirculation Valves
- Severe Service and General Service Control Valves

Our products must comply with certification standards applicable to many of our end markets. These standards include but are not limited to ISO 9001:2008, ANSI/ASQC Q 9001, API 676, and Mil-I-45208.

### *Customers*

Industrial's products and services are sold directly to end-users, OEMs that supply specialized systems in their respective end markets, and EPC companies through a global network of direct and indirect sales channels.

### *Revenue and Backlog*

Industrial accounted for \$450.7 million, \$487.6 million and \$139.1 million or 47%, 48% and 28% of our net revenues for the years ended December 31, 2019, 2018 and 2017. Industrial backlog as of January 31, 2020 was \$157.2 million compared with \$168.2 million as of January 31, 2019. Industrial backlog represents backlog orders we believe to be firm.

## **Aerospace & Defense**

Aerospace & Defense is a diversified flow control technology platform. Our primary product focus areas are valves, pumps, actuation, motors, switches, and high pressure pneumatic systems.

Aerospace & Defense products are mainly used in aerospace, defense, and general industrial markets.

We plan to grow Aerospace & Defense by increasing market share in existing and new markets through exceptional sales and customer service enabled by innovative, reliable and high quality solutions. Product portfolio expansion through acquisitions of differentiated technologies in current and adjacent applications is also a key part of our growth strategy.

We have Aerospace & Defense facilities in North America, the United Kingdom, France, Morocco, and India. Our Aerospace & Defense headquarters is in Corona, California.

### ***Markets and Applications***

Aerospace & Defense serves the aerospace and defense markets.

- The aerospace market that we serve includes commercial aerospace primarily focused on systems and components on airliners and business jets, such as hydraulic, pneumatic, fuel and ground support equipment including maintenance, repair and overhaul (MRO). In addition, we serve the defense aerospace market, including military and naval applications where controls or motion switches are mission critical. We support fixed wing aircraft, rotorcraft, missile systems, ground vehicles, submarines, weapon systems and weapon launch systems, ordinance, fire control, fuel systems, pneumatic controls, and hydraulic and dockside support equipment including MRO.

- The non-aerospace defense market that we serve is primarily focused on naval vessels, with our pumps and valves used across most naval platforms in a wide variety of onboard applications. We are a trusted supplier to many countries' navies, leveraging our engineering and manufacturing capabilities to work directly with our customers in developing targeted solutions for mission critical applications including very low acoustic signature pumps for submarines.

### ***Brands***

Aerospace & Defense manufactures and markets control valves, automatic recirculation valves, regulators, fluid controls, actuation systems, landing gear components, pneumatic controls, electro-mechanical controls, and other flow control products and systems. Aerospace & Defense provides actuation and fluid control systems and services through the following brands: CIRCOR Aerospace, Aerodyne Controls, CIRCOR Bodet, CIRCOR Industria, CIRCOR Motors, Hale Hamilton, Leslie Controls, Portland Valve, and Warren Pumps.

### ***Products***

Aerospace & Defense offers a range of solutions, including:

- Specialty Centrifugal, 2-Screw, and Propeller Pumps
- Specialized control valves
- MIL-Spec butterfly valves and actuators
- Electromechanical, pneumatic and hydraulic, fluid and motion control systems
- Actuation components and sub-systems

In the manufacture of our products, we must comply with certain certification standards, such as AS9100C, ISO 9001:2008, National Aerospace & Defense Contractors Accreditation Program, Federal Aviation Administration Certification and European Aviation Safety Agency as well as other customer qualification standards. Currently all of our manufacturing facilities comply with the applicable standards.

### ***Customers***

Aerospace & Defense products and services are used by a range of customers, including those in the military and defense, commercial aerospace, business and general aviation, and general industrial markets. Our customers include aircraft manufacturers (OEMs) and Tier 1 suppliers to these customers.

## *Revenue and Backlog*

Aerospace & Defense accounted for \$272.6 million, \$237.0 million and \$183.0 million, or 28%, 23% and 36% of our net revenues for the years ended December 31, 2019, 2018 and 2017, respectively. Aerospace & Defense backlog as of January 31, 2020 was \$191.1 million compared with \$183.3 million as of January 31, 2019. Aerospace & Defense backlog represents orders we believe to be firm.

## ***Energy***

The Energy segment significantly changed in 2019, reflecting CIRCOR's move away from the upstream oil and gas markets, as well as the divestiture of non-core assets. The Reliability Services business, which was added to the Energy segment in 2018 after the Fluid Handling acquisition, was divested in January of 2019. Reflecting our strategic shift away from upstream oil and gas, the EV business was divested in July 2019, and the DV business has been classified as held for sale. Additionally, in January 2020, we sold our non-core Instrumentation and Sampling business.

The remaining Energy businesses provide highly engineered integrated flow control solutions, valves, pipelines products and services for the midstream and downstream oil & gas and refinery markets.

We are focused on satisfying our customers' mission-critical application needs by utilizing advanced technologies. Our flow control solutions can withstand extreme temperatures and pressures, and as such are used in the most critical and severe service applications. Our installations include refining and petrochemical process control, critical pressure control and midstream pipeline engineering solutions and services.

Energy is headquartered in Houston, Texas and has manufacturing facilities in North America, the United Kingdom, India and United Arab Emirates.

## *Markets and Applications*

Energy serves a range of energy-focused global markets. Key to our business strategy is targeting additional markets that can benefit from our innovative products and system solutions. The primary markets served today include oil & gas: midstream and downstream, as well as petrochemical processing. The midstream markets are primarily served by our pipeline engineering business, and downstream and petrochemical markets are served primarily by our Refinery Valves, Instrumentation and Sampling business, and Reliability Services business until the latter two were sold in January 2020 and January 2019, respectively.

- **Midstream Oil & Gas:** This market begins at the mainline transmission pipeline and extends to the fence around the refinery or petrochemical plant. It includes certain ancillary equipment, as well as the gas processing plants that prepare and purify raw natural gas for entry into the major pipeline systems and Liquid Natural Gas (LNG) liquefaction and transport processes. Our valves are used for flow control in the main transmission lines, gathering systems, and storage facilities. We also provide inspection and cleaning products and services designed to ensure the integrity of transmission pipelines.
- **Downstream Oil & Gas:** The downstream market includes the refining, distilling, stripping, degassing, dehydrating, desulphurizing, and purifying of crude oil to its constituent components. In addition to flow control applications for feedstocks and process control across each downstream process unit, our refinery valves business provides highly specialized engineered solutions for coking and catalytic cracking that improve the safety and efficiency of operations within the refinery.
- **Petrochemical Processing:** The petrochemical processing market includes the refining and manufacture of chemicals derived from oil and gas, such as polyethylene. This market requires specific instrumentation and ancillary equipment to monitor the quality and efficiency of production.

## *Brands*

Energy provides its flow control solutions and services through the following significant brands: DeltaValve, Pipeline Engineering, and TapcoEnpro.

## *Products*

Energy offers a range of flow control solutions (distributed and highly engineered) and services, including:

- Pipeline pigs, quick opening closure, pig signalers
- Delayed coking unheading devices and fluid catalytic converter and isolation valves

For our manufactured products, we are subject to applicable federal, state and local regulations. In addition, many of our customers require us to comply with certain industrial standards, including those issued by the American Petroleum Institute, International Organization for Standardization, Underwriters' Laboratory, American National Standards Institute, American Society of Mechanical Engineers, and the European Pressure Equipment Directive. We also need to meet standards that qualify us to be on authorized supplier lists with various global end users. We are fully qualified and licensed for the API 6D, API 6DSS and API 6A PSL4.

### *Customers*

Energy's products and services are sold to end-user customers, such as major oil companies, EPC companies, and distributors, through sales channels that include direct sales, sales representatives, and agents.

### *Revenue and Backlog*

Energy accounted for \$241.0 million, \$288.9 million, and \$183.4 million, or 25%, 29%, and 36% of our net revenues for the years ended December 31, 2019, 2018 and 2017, respectively. Energy's backlog as of January 31, 2020 was \$61.4 million compared with \$77.2 million as of January 31, 2019. Energy backlog represents backlog orders we believe to be firm.

## **CIRCOR Consolidated**

### **Competition**

The domestic and international markets for our products are highly competitive. Some of our competitors have substantially greater financial, marketing, personnel and other resources than us. We consider product brand, quality, performance, on-time delivery, customer service, price, distribution capabilities and breadth of product offerings to be the primary competitive factors in these markets. We believe that new product development and product engineering also are important to our success and that our position in the industry is attributable, in significant part, to our ability to develop innovative products and to adapt existing products to specific customer applications.

The primary competitors of our Industrial segment include: Leistritz AG, Curtiss-Wright Corporation, Netzsch GmbH, ITT Corporation, Seepex GmbH, and Naniwa Ltd.

The primary competitors of our Aerospace & Defense segment include: Transdigm, Crane Co., Curtiss-Wright Corporation, Moog, Inc., Parker Hannifin Corp., and Woodward Inc.

The primary competitors of our Energy segment include: T.D. Williamson, Blac Inc, IMI plc, and Baker Hughes.

### **New Product Development**

Our engineering differentiation comes from our ability to offer products, solutions and services that address high pressure, high temperature, and caustic flow. Our solutions offer high standards of reliability, safety and durability in applications requiring precision movement and zero leakage.

We continue to develop new and innovative products to enhance our market positions. Our product development capabilities include designing and manufacturing custom applications to meet high tolerance or close precision requirements. For example, our Energy segment operation can meet the tolerance requirements of sub-sea, cryogenic environments as well as critical service steam applications. Our Aerospace & Defense segment continues to expand its integrated systems design and testing capability to support bundled sub-systems for aeronautics applications, as well as acoustically superior motors for marine applications. These testing and manufacturing capabilities enable us to develop customer-specified applications. In many cases, the unique characteristics of our customer-specified technologies have been subsequently used in broader product offerings. The Industrial segment provides unique fluid handling products for viscous and critical fluids with specific design and engineering capabilities, as well as highly differentiated smart technology for specific applications.



We maintain a Global Engineering Center of Excellence in India with a capable technology and engineering team that complements the engineering resources in a business unit.

## **Customers**

For the years ended December 31, 2019, 2018, and 2017, no customers accounted for more than 10% of the Company's consolidated revenues. Our businesses sell into both long-term capital projects as well as short-cycle demand. As a result, we tend to experience fluctuations in orders, revenues and operating results at various points across economic and business cycles. Our Energy businesses can be cyclical in nature due to the fluctuation of the worldwide price, supply and demand for oil and gas. When the worldwide demand for oil and gas is depressed, the demand for our products used in those markets decreases as our customers with higher production costs will cut back investment and reduce purchases from us. The level of capital expenditures by national oil companies or the oil majors in exploration and production activities drive demand for our long cycle, engineered valves products. Maintenance expenditures during refinery turnarounds drive demand for our refinery valve products. Similarly, although not to the same extent as the oil & gas markets, the aerospace, military and maritime markets have historically experienced cyclical fluctuations in demand.

## **Selling and Distribution**

Across our businesses we utilize a variety of channels to market our products and solutions. Those channels include direct sales, distributors, commissioned representatives, and our service centers. Our distribution and representative networks typically offer technically trained sales forces with strong relationships in key markets.

We believe that our well-established sales and distribution channels constitute a competitive strength. We believe that we have good relationships with our representatives and distributors. We continue to implement marketing programs to enhance these relationships. Our ongoing distribution-enhancement programs include reducing lead times, introducing new products, and offering competitive pricing, application design, technical training, and service.

## **Intellectual Property**

We own patents that are scheduled to expire between 2019 and 2030 and trademarks that can be renewed as long as we continue to use them. We do not believe the vitality and competitiveness of any of our business segments as a whole depends on any one or more patents or trademarks. We own certain licenses such as software licenses, but we do not believe that our business as a whole depends on any one or more licenses.

## **Raw Materials**

The raw materials used most often in our production processes are castings, forgings and bar stock of various materials, including stainless steel, carbon steel, bronze, copper, brass, titanium and aluminum. These materials are subject to price fluctuations that may adversely affect our results of operations. We purchase these materials from numerous suppliers and at times experience constraints on the supply of certain raw material as well as the inability of certain suppliers to respond to our needs. Historically, increases in the prices of raw materials have been partially offset by higher sales prices, active materials management, project engineering programs and the diversity of materials used in our production processes.

## **Employees and Labor Relations**

As of January 31, 2020, our worldwide operations directly employed approximately 4,000 people. We have 71 employees in North America who are covered by two collective bargaining agreements. We also have the following employees covered by governmental regulations or workers' councils:

- Germany - 702 employees
- France - 105 employees
- Mexico - 100 employees
- Netherlands- 46 employees
- United Kingdom - 25 employees
- Sweden - 9 employees

We believe that our employee relations are good at this time.

## Available Information

We file reports on Form 10-Q with the Securities and Exchange Commission ("SEC") on a quarterly basis, additional reports on Form 8-K from time to time, and an annual report on Form 10-K on an annual basis. These and other reports filed by us, or furnished by us, to the SEC in accordance with section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge from the SEC on its website at <http://www.sec.gov>. Additionally, our Form 10-Q, Form 8-K, Form 10-K and amendments to those reports are available without charge, as soon as reasonably practicable after they have been filed with, or furnished to, the SEC, on our Investor Relations website at <http://investors.CIRCOR.com>. The information on our website is not part of, or incorporated by reference in, this Annual Report.

## Item 1A. Risk Factors

*Set forth below are certain risk factors that we believe are material to our stockholders. The risks described in these risk factors could harm our business, financial condition, cash flows, results of operations and reputation. You should also consider these risk factors when you read "forward-looking statements" elsewhere in this report. You can identify forward-looking statements by terms such as "may," "hope," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "potential" or "continue," the negative of those terms or other comparable terminology. Forward-looking statements are only predictions and can be adversely affected by any of the following risks:*

### **Some of our end-markets are cyclical, which causes us to experience fluctuations in revenues or operating results.**

We have experienced, and expect to continue to experience, fluctuations in revenues and operating results due to economic and business cycles. Results of operations for any particular period are not necessarily indicative of the results of operations for any future period. We sell our products principally to aerospace, military, commercial aircraft, oil & gas exploration, transmission and refining, power generation, chemical processing and maritime markets. Although we serve a variety of markets to reduce dependency on any one, a significant downturn in any one of these markets could cause a material reduction in our revenues that we may not be able to offset. In addition, decreased market demand typically results in excess manufacturing capacity among our competitors which, in turn, results in pricing pressure. As a consequence, a significant downturn in our markets results in lower revenues and profit margins.

In particular, our Energy businesses are cyclical in nature as the worldwide demand for oil and gas fluctuates. Energy sector activity can fluctuate significantly in a short period of time, particularly in the United States, North Sea, the Middle East, Brazil and Australia, amongst other regions. When worldwide demand for oil and gas is depressed, the demand for our products used in maintenance and repair of existing oil and gas applications, as well as exploration or new oil and gas project applications, is reduced. Demand for our products and services depends on a number of factors, including the maintenance and condition of industry assets, the volume of exploration and production activities and the capital expenditures of asset owners and maintenance companies. The willingness of asset owners and operators to make capital expenditures to produce and explore for sources of energy will continue to be influenced by numerous factors over which we have no control, including:

- the current and anticipated future prices for energy sources, including oil and natural gas, solar, wind and nuclear;
- level of excess production capacity;
- cost of exploring for and producing energy sources;
- worldwide economic activity and associated demand for energy sources;
- availability and access to potential hydrocarbon resources;
- national government political priorities, including with respect to climate change risks;
- development of alternate energy sources; and
- environmental regulations.

As a result, we historically have generated lower revenues and profits in periods of declining demand or prices for crude oil and natural gas. Any downward pricing pressure on crude oil could have a material adverse effect on our business, financial condition, cash flows, or results of operations.

### **We face significant competition and, if we are not able to respond, our revenues may decrease.**

We face significant competition from a variety of competitors in each of our markets. Some of our competitors have substantially greater financial, marketing, personnel and other resources than we do. New competitors also could enter our markets. We consider product quality, performance, customer service, on-time delivery, price, distribution capabilities and breadth of product offerings to be the primary competitive factors in our markets. Our competitors may be able to offer more

attractive pricing, duplicate our strategies, or develop enhancements to products that could offer performance features that are superior to our products. Competitive pressures, including those described above, and other factors could adversely affect our competitive position, resulting in a loss of market share or decreases in prices, either of which could have a material adverse effect on our business, financial condition, cash flows or results of operations. In addition, some of our competitors are based in foreign countries and have cost structures and prices based on foreign currencies.

The majority of our transactions are denominated in either U.S. dollar or Euro currency. Accordingly, currency fluctuations could cause our U.S. dollar and/or Euro priced products to be less competitive than our competitors' products that are priced in other currencies.

**If we cannot continue operating our manufacturing facilities at current or higher levels, our results of operations could be adversely affected.**

We operate a number of manufacturing facilities for the production of our products. The equipment and management systems necessary for such operations may break down, perform poorly or fail, resulting in fluctuations in manufacturing efficiencies. Such fluctuations may affect our ability to deliver products to our customers on a timely basis, which could have a material adverse effect on our business, financial condition, cash flows or results of operations. We have continuously enhanced and improved Lean manufacturing techniques as part of the CIRCOR Operating System. We believe that this process produces meaningful reductions in manufacturing costs. However, continuous improvement of these techniques may cause short-term inefficiencies in production. If we are not successful in continuously improving our processes, our results of operations may suffer.

We completed the acquisition of FH on December 11, 2017. The success of the acquisition, including the achievement of anticipated benefits and cost savings of the acquisition, is subject to a number of uncertainties and will depend, in part, on our ability to successfully combine and integrate FH's business into our business in an efficient and effective manner. Potential difficulties that we may encounter in the integration process include the following:

- the inability to successfully integrate FH's business into our own in a manner that permits us to achieve the cost savings and operating synergies anticipated to result from the acquisition, which could result in the anticipated benefits of the acquisition not being realized partly or wholly in the time frame currently anticipated or at all;
- integrating personnel, IT systems and corporate, finance and administrative infrastructures of FH into our Company while maintaining focus on providing consistent, high quality products and services;
- coordinating and integrating our internal operations, compensation programs, policies and procedures, and corporate structures;
- potential unknown liabilities and unforeseen or increased costs and expenses;
- the possibility of faulty assumptions underlying expectations regarding potential synergies and the integration process;
- performance shortfalls as a result of the diversion of management's attention caused by integrating operations; and
- servicing the debt that we have incurred in connection with the acquisition.

Any of these factors could result in us failing to realize the anticipated benefits of the acquisition, on the expected timeline or at all, and could adversely impact our business, financial condition, cash flows and results of operations.

**Actions of stockholders or others in response to expiration of the recent unsolicited tender offer could cause us to incur substantial costs, divert management's attention and resources, and have an adverse effect on our business.**

During the second quarter of 2019, we became subject to an unsolicited tender offer to purchase all outstanding shares of our common stock. At the time the tender offer expired on July 19, 2019, approximately two-thirds of our issued and outstanding shares had been tendered and, as a result, we have and expect that we will continue to receive additional attention and scrutiny from investors, potential acquirors, activist stockholders and others. Various actions to seek to effect change are available to such persons, including private engagement, public campaigns, proxy contests, litigation and other efforts to force transactions not supported by our board of directors or to acquire control over our Company. Responding to such actions is costly and time-consuming, may not align with our business strategies and could divert the attention of our board of directors and management from the management of our operations and the pursuit of business strategies. In addition, perceived uncertainties as to our future direction, strategy or leadership created as a consequence of any such actions may result in the loss of potential business opportunities, harm our ability to attract new investors, customers and employees, and cause our stock price to experience periods of volatility or stagnation.

**A potential proxy contest launched by GAMCO Investors, Inc. (“GAMCO”) could cause us to incur substantial costs, divert management’s attention and resources, and have an adverse effect on our business.**

On February 6, 2020, GAMCO Investors, Inc. notified us of its intention to nominate two directors at our 2020 annual meeting of stockholders. If GAMCO pursues a proxy contest or other actions at the 2020 annual meeting of stockholders to elect directors other than those recommended by our board of directors, or takes other actions that contest or conflict with our strategic direction, any such actions could have an adverse effect on us because:

- responding to proxy contests may be costly and time-consuming and may disrupt our operations and divert the attention of our management and our employees; and
- perceived uncertainties as to our future direction may be exploited by our competitors, cause concern to our current or potential customers, result in the loss of potential business opportunities and make it more difficult to attract and retain qualified personnel and business partners and may affect our relationships with vendors, customers and other third parties.

**Implementation of our divestiture, restructuring, or simplification strategies may not be successful, which could affect our ability to increase our revenues or could reduce our profitability.**

We continually review our current business and products to attempt to maximize our performance. As part of this process, during 2019 we disposed of, announced plans to dispose of, or entered into agreements to dispose of our Reliability Services business, Engineered Valves business, certain assets and liabilities related to our Spence and Nicholson product lines, Distributed Valves business, and Instrumentation and Sampling business. We may in the future deem it appropriate to divest additional product lines or businesses. Any divestiture may result in a dilutive impact to our future earnings if we are unable to offset the dilutive impacts from the loss of revenue associated with the divested assets or businesses, as well as significant write-offs, including those related to goodwill and other intangible assets, which could have a material adverse effect on our results of operations and financial condition. A successful divestiture depends on various factors, including our ability to effectively transfer liabilities, contracts, facilities and employees to any purchaser, identify and separate the intellectual property to be divested from the intellectual property that we wish to retain, reduce fixed costs previously associated with the divested assets or business, and collect the proceeds from any divestitures. In addition, if customers of the divested business do not receive the same level of service from the new owners, this may adversely affect our other businesses to the extent that these customers also purchase other products offered by us. All of these efforts require varying levels of management resources, which may divert our attention from other business operations.

A focus of our Company is to simplify the way we are organized and the number of facilities we manage. We believe that such focus will reduce overhead structure, enhance operational synergies, and result in improved operating margins and customer service. Nevertheless, we may not achieve expected cost savings from restructuring and simplification activities and actual charges, costs and adjustments due to such activities may vary materially from our estimates. Our ability to realize anticipated cost savings, synergies, margin improvement, and revenue enhancements may be affected by a number of factors, including: our ability to effectively eliminate duplicative overhead, rationalize manufacturing capacity, synchronize information technology systems, consolidate warehousing and distribution facilities and shift production to more economical facilities; significant cash and non-cash integration and implementation costs or charges in order to achieve those cost savings, which could offset any such savings; and our ability to avoid labor disruption in connection with divestitures or restructuring activities.

If we do not realize the expected benefits or synergies of any divestiture, restructuring, or simplification activities, our business, financial condition, cash flows and results of operations could be negatively impacted.

**Implementation of our acquisition strategy may not be successful, which could affect our ability to increase our revenues, reduce our profitability or lead to significant impairment charges.**

One of our strategies has been and is to increase our revenues and expand our markets through acquisitions that will provide us with complementary products and access to additional geographic markets. We expect to spend significant time and effort expanding our existing businesses and identifying, completing and integrating acquisitions. We expect to face competition for acquisition candidates that may limit the number of acquisition opportunities available to us and may result in higher acquisition prices. We cannot be certain that we will be able to identify, acquire or profitably manage additional companies or successfully integrate such additional companies without substantial costs, delays or other problems. Acquisitions may also

involve a number of special risks, including: adverse effects on our reported operating results; use of cash; diversion of management's attention; loss of key personnel at acquired companies; or unanticipated management or operational problems or legal liabilities. Moreover, there can be no assurance that companies we have previously acquired or that we may acquire in the future ultimately will achieve the revenues, profitability or cash flows, or generate the synergies upon which we justify our investment in them; as a result, any such under-performing acquisitions could result in impairment charges which would adversely affect our results of operations. The acquired assets of businesses include goodwill and indefinite-lived intangible assets which are required to be tested for impairment at least annually or more frequently if impairment indicators are present. Events or changes that could indicate that the carrying value of our goodwill or indefinite-lived intangible assets may not be recoverable include reduced future cash flow estimates, slower growth rates in industry segments in which we participate and a decline in our stock price and market capitalization. The Company has recently experienced a significant decline in its market capitalization to below book value, which increases the risk of impairment charges. In addition, any prolonged material disruption of our employees, distributors, suppliers or customers, whether due to the recent coronavirus disease or otherwise, would negatively impact our global sales and operating results and could lead to impairments and other valuation allowances.

**If we are unable to continue operating successfully overseas or to successfully expand into new international markets, our revenues may decrease.**

We derive a significant portion of our revenue from sales outside the United States. In addition, one of our key growth strategies is to sell our products in international markets not significantly served by us in portions of Europe, Latin America and Asia. We market our products and services outside of the United States through direct sales, distributors, and technically trained commissioned representatives. We may not succeed in our efforts to further penetrate these markets. Moreover, conducting business outside the United States is subject to additional risks, including currency exchange rate fluctuations; changes in regional, political or economic conditions, trade protection measures such as tariffs or import or export restrictions; and complex, varying and changing government regulations and legal standards and requirements, particularly with respect to price protection, competition practices, export control regulations and restrictions, customs and tax requirements, immigration, anti-boycott regulations, data privacy, intellectual property, anti-corruption and environmental compliance, including U.S. customs and export regulations and restrictions and the Foreign Corrupt Practices Act, and the occurrence of any of these factors could materially and adversely affect our operations.

**If we cannot pass on higher raw material or manufacturing costs to our customers, we may become less profitable.**

One of the ways we attempt to manage the risk of higher raw material and manufacturing costs is to increase selling prices to our customers. The markets we serve are extremely competitive and customers may not accept price increases or may look to alternative suppliers, which may negatively impact our profitability and revenues.

**If our suppliers cannot provide us with adequate quantities of materials to meet our customers' demands on a timely basis or if the quality of the materials provided does not meet our standards, we may lose customers or experience lower profitability.**

Some of our customer contracts require us to compensate those customers if we do not meet specified delivery obligations. We rely on numerous suppliers to provide us with our required materials and in many instances these materials must meet certain specifications. In addition, we continue to increase our dependence on lower cost foreign sources of raw materials, components, and, in some cases, completed products. Managing a geographically diverse supply base inherently poses significant logistical challenges, and we could experience diminished supplier performance resulting in longer than expected lead times and/or product quality issues. The occurrence of such factors could have a negative impact on our ability to deliver products to customers within our committed time frames and could adversely impact our results of operations, financial conditions and cash flows.

**Our international activities expose us to fluctuations in currency exchange rates that could adversely affect our results of operations and cash flows.**

Our international manufacturing and sales activities expose us to changes in foreign currency exchange rates. Our major foreign currency exposures involve the markets in Western Europe and Canada. Fluctuations in foreign currency exchange rates could result in our (i) paying higher prices for certain imported goods and services, (ii) realizing lower prices for any sales denominated in currencies other than U.S. dollars, (iii) realizing lower net income, on a U.S. dollar basis, from our international operations due to the effects of translation from weakened functional currencies, and (iv) realizing higher costs to settle transactions denominated in other currencies. Any of these risks could adversely affect our results of operations and cash flows.

We use derivatives to help manage the currency risk related to certain business transactions denominated in foreign currencies. To the extent these transactions are completed, the contracts minimize our risk from exchange rate fluctuations because they offset gains and losses on the related derivatives. However, there can be no assurances that we will be able to effectively utilize these forward exchange contracts in the future to offset significant risk related to fluctuations in currency exchange rates. In addition, there can be no assurances that counterparties to such contracts will perform their contractual obligations to us in order for us to realize the anticipated benefits of the contracts.

**If we experience delays in introducing new products or if our existing or new products do not achieve or maintain market acceptance, our revenues may decrease.**

Our industries are characterized by: intense competition; changes in end-user requirements; technically complex products; and evolving product offerings and introductions.

We believe our future success depends, in part, on our ability to anticipate or adapt to these factors and to offer, on a timely basis, products that meet customer demands. Failure to develop new and innovative products or to custom design existing products could result in the loss of existing customers to competitors or the inability to attract new business, either of which may adversely affect our revenues. The development of new or enhanced products is a complex and uncertain process requiring the anticipation of technological and market trends. We may experience design, manufacturing, marketing or other difficulties, such as an inability to attract a sufficient number of qualified engineers, which could delay or prevent our development, introduction or marketing of new products or enhancements and result in unexpected expenses.

**If we fail to manufacture and deliver high quality products in accordance with industry standards, we will lose customers.**

Product quality and performance are a priority for our customers since many of our product applications involve caustic or volatile chemicals and, in many cases, involve processes that require precise control of fluids. Our products are used in the aerospace, military, commercial aircraft, analytical equipment, oil & gas exploration, transmission and refining, power generation, chemical processing and maritime industries. These industries require products that meet stringent performance and safety standards, such as the standards of the American Petroleum Institute, International Organization for Standardization, Underwriters' Laboratory, American National Standards Institute, American Society of Mechanical Engineers and the European Pressure Equipment Directive. If we fail to maintain and enforce quality control and testing procedures, our products will not meet these stringent performance and safety standards which are required by many of our customers. Non-compliance with the standards could result in a loss of current customers and damage our ability to attract new customers, which could have a material adverse effect on our business, financial condition, cash flows or results of operations.

**We depend on our key personnel and the loss of their services may adversely affect our business.**

We believe that our success depends on our ability to hire new talent and the continued employment of our senior management team and other key personnel. If one or more members of our senior management team or other key personnel were unable or unwilling to continue in their present positions, our business could be seriously harmed. In addition, if any of our key personnel joins a competitor or forms a competing company, some of our customers might choose to use the services of that competitor or those of a new company instead of our own. Other companies seeking to develop capabilities and products similar to ours may hire away some of our key personnel. If we are unable to maintain our key personnel and attract new employees, the execution of our business strategy may be hindered and our growth limited.

**We face risks from product liability lawsuits that may adversely affect our business.**

We, like other manufacturers, face an inherent risk of exposure to product liability claims in the event that the use of our products results in personal injury, property damage or business interruption to our customers. We may be subjected to various product liability claims, including, among others, that our products include inadequate or improper instructions for use or installation, or inadequate warnings concerning the effects of the failure of our products. Although we maintain quality controls and procedures, including the testing of raw materials and safety testing of selected finished products, we cannot be certain that our products will be free from defect. In addition, in certain cases, we rely on third-party manufacturers for our products or components of our products. Although we have liability insurance coverage, we cannot be certain that this insurance coverage will continue to be available to us at a reasonable cost or, if available, will be adequate to cover any such liabilities. For example, liability insurance typically does not afford coverage for a design or manufacturing defect unless such defect results in injury to person or property. We generally attempt to contractually limit liability to our customers to risks that are insurable but are not always successful in doing so. Similarly, we generally seek to obtain contractual indemnification from our third-party suppliers, and for us to be added as an additional insured party under such parties' insurance policies. Any such indemnification or insurance is limited by its terms and, as a practical matter, is limited to the credit worthiness of the

indemnifying or insuring party. In the event that we do not have adequate insurance or contractual indemnification, product liabilities could have a material adverse effect on our business, financial condition, cash flows or results of operations.

**We rely on information technology in our operations, and any material failure, inadequacy, interruption or security failure of that technology could harm our business, financial condition, cash flows and results of operations.**

We rely on information technology networks and systems, including systems of third parties and the Internet, to process, transmit and store electronic information, and manage or support a variety of business processes, including operational and financial transactions and records, personal identifying information, payroll data and workforce scheduling information. We purchase some of our information technology from vendors, on whom our systems depend. We rely on commercially available systems, software, tools and monitoring to provide security for the processing, transmission and storage of Company and customer information. Although we have taken steps to protect the security of our information systems and the data maintained in those systems, no such measures can eliminate the possibility of the systems' improper functioning or the improper access or disclosure of confidential or personally identifiable information such as in the event of cyber-attacks. Security breaches, whether through physical or electronic break-ins, computer viruses, ransomware, impersonation of authorized users, attacks by hackers or other means, can create system disruptions or shutdowns or the unauthorized disclosure of confidential information. Additionally, outside parties frequently attempt to fraudulently induce employees, suppliers or customers to disclose sensitive information or take other actions, including making fraudulent payments or downloading malware, by using “spoofing” and “phishing” emails or other types of attacks. Our employees have been and likely will continue to be targeted by such fraudulent activities. Outside parties may also subject us to distributed denial of services attacks or introduce viruses or other malware through “trojan horse” programs to our users’ computers in order to gain access to our systems and the data stored therein. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and continuously become more sophisticated, often are not recognized until launched against a target and may be difficult to detect for a long time, we may be unable to anticipate these techniques or to implement adequate preventive or detective measures.

If Company, personal or otherwise protected information is improperly accessed, tampered with or distributed, we may face significant financial exposure, including incurring significant costs to remediate possible injury to the affected parties. We may also be subject to sanctions and civil or criminal penalties if we are found to be in violation of the privacy or security rules under federal, state, or international laws protecting confidential information. Any failure to maintain proper functionality and security of our information systems could interrupt our operations, damage our reputation, subject us to liability claims or regulatory penalties and could have a material adverse effect on our business, financial condition, cash flows and results of operations.

**The trading price of our common stock continues to be volatile and investors in our common stock may experience substantial losses.**

The trading price of our common stock may be, and, in the past, has been volatile. Our common stock could decline or fluctuate in response to a variety of factors, including, but not limited to: our failure to meet our performance estimates or performance estimates of securities analysts; changes in financial estimates of our revenues and operating results or buy/sell recommendations by securities analysts; the timing of announcements by us or our competitors concerning significant product line developments, contracts or acquisitions or publicity regarding actual or potential results or performance; fluctuation in our quarterly operating results caused by fluctuations in revenue and expenses; substantial sales of our common stock by our existing shareholders; general stock market conditions; and fluctuations in oil and gas prices or other economic or external factors. While we attempt in our public disclosures to provide forward-looking information in order to enable investors to anticipate our future performance, such information by its nature represents our good-faith forecasting efforts. In recent years, the unprecedented nature of oil prices, credit and financial crises and economic recessions, together with the uncertain depth and duration of these crises, has rendered such forecasting more difficult. As a result, our actual results have differed materially, and going forward could differ materially, from our forecasts, which could cause further volatility in the value of our common stock.

In recent years the stock market as a whole has experienced dramatic price and volume fluctuations. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of their securities. This type of litigation could result in substantial costs and a diversion of management attention and resources.

**The costs of complying with existing or future governmental regulations on importing and exporting practices and of curing any violations of these regulations, could increase our expenses, reduce our revenues or reduce our profitability.**

We are subject to a variety of laws and international trade practices, including regulations issued by the United States Bureau of Industry and Security, the Department of Homeland Security, the Department of State and the Department of Treasury. We cannot predict the nature, scope or effect of future regulatory requirements to which our international trading practices might be subject or the manner in which existing laws might be administered or interpreted. Future regulations could limit the countries into which certain of our products may be sold or could restrict our access to, and increase the cost of obtaining products from, foreign sources. In addition, actual or alleged violations of such regulations could result in enforcement actions and/or financial penalties that could result in substantial costs.

**If we incur higher costs as a result of trade policies, treaties, government regulations or tariffs, we may become less profitable.**

There is currently significant uncertainty about the future relationship between the United States and China, including with respect to trade policies, treaties, government regulations and tariffs. The current U.S. administration has called for substantial changes to U.S. foreign trade policy and has implemented greater restrictions on international trade and significant increases in tariffs on goods imported into the U.S. Under the current status, we expect that tariff increases will primarily impact our Industrial segment. We are unable to predict whether or when additional tariffs will be imposed or the impact of any such future tariff increases.

**If we are unable to generate sufficient cash flow, we may not be able to service our debt obligations, including making payments on our outstanding term loan.**

Our ability to make payments of principal and interest on our indebtedness when due, including the significant indebtedness that we incurred in connection with the acquisition of FH, depends upon our future performance, which will be subject to general economic conditions, industry cycles and financial, business and other factors affecting our consolidated operations, many of which are beyond our control. If we are unable to generate sufficient cash flow from operations in the future to service our outstanding debt, we may be required to, among other things:

- seek additional financing in the debt or equity markets;
- refinance or restructure all or a portion of our indebtedness;
- divert funds that would otherwise be invested in our operations;
- sell selected assets; or
- reduce or delay planned capital expenditures or operating expenditures.

Such measures might not be sufficient to enable us to service our debt, which could negatively impact our financial results. In addition, we may not be able to obtain any such financing, refinancing or complete a sale of assets on economically favorable terms. In the case of financing or refinancing, favorable interest rates will be dependent on the health of the debt capital markets.

Our existing indebtedness could also have the effect, among other things, of reducing our flexibility to respond to changing business and economic conditions, reducing funds available for working capital, capital expenditures, acquisitions and other general corporate purposes or creating competitive disadvantages relative to other companies with lower debt levels.

**Our credit agreement requires that we maintain certain ratios and limits our ability to make acquisitions, incur debt, pay dividends, make investments, sell assets or merge.**

Our credit agreement, dated December 11, 2017, governs our indebtedness. This agreement includes provisions which place limitations on certain activities, including our ability to: issue; incur additional indebtedness; create any liens or encumbrances on our assets or make any guarantees; make certain investments; pay cash dividends above certain limits; or dispose of or sell assets or enter into a merger or a similar transaction. These restrictions may limit our ability to operate our business and may prohibit or limit our ability to execute our business strategy, compete, enhance our operations, take advantage of potential business opportunities as they arise or meet our capital needs. Furthermore, future debt instruments or other contracts could contain more restrictive financial or other covenants. The breach of any of these covenants by us or the failure by us to meet any of these conditions or requirements could result in a default under any or all of our indebtedness. If we are unable to



service our indebtedness, our business, financial condition, cash flows and results of operations would be materially adversely affected.

**Various restrictions and agreements could hinder a takeover of us which is not supported by our board of directors or which is leveraged but which may be beneficial to our shareholders.**

Our amended and restated certificate of incorporation and amended and restated by-laws, as well as the Delaware General Corporation Law, contain provisions that could delay or prevent a change in control in a transaction that is not approved by our board of directors or that is on a leveraged basis or otherwise but that shareholders may consider favorable, including transactions in which shareholders might otherwise receive a premium for their shares. These include provisions establishing a staggered board, limiting the shareholders' powers to remove directors, and prohibiting shareholders from calling a special meeting or taking action by written consent in lieu of a shareholders' meeting. In addition, our board of directors has the authority, without further action by the shareholders, to set the terms of and to issue preferred stock. Issuing preferred stock could adversely affect the voting power of the owners of our common stock, including the loss of voting control to others.

Delaying or preventing a takeover could result in our shareholders ultimately receiving less for their shares by deterring potential bidders for our stock or assets.

**A change in international governmental policies or restrictions could result in decreased availability and increased costs for certain components and finished products that we purchase from sources in foreign countries, which could adversely affect our profitability.**

Like most manufacturers of flow control products, we attempt, where appropriate, to reduce costs by seeking lower cost sources of certain components and finished products. Many such sources are located in developing countries such as India and China, where a change in governmental approach toward U.S. trade could restrict the availability to us of such sources. In addition, periods of war or other international tension and global health pandemics could interfere with international freight operations and hinder our ability to purchase such components and products. A decrease in the availability of these items could hinder our ability to timely meet our customers' orders. We attempt, when possible, to maintain alternate sources for these components and products and the capability to produce such items in our own manufacturing facilities. However, the cost of obtaining such items from alternate sources or producing them ourselves is often considerably greater, and a shift toward such higher cost production could therefore adversely affect our profitability.

**We, along with our customers and vendors, face the uncertainty in the public and private credit markets and in general economic conditions in the United States and around the world.**

In recent years there has been at times disruption and general slowdown of the public and private capital and credit markets in the United States and around the world. Such conditions can adversely affect our revenue, results of operations and overall financial growth. Our business can be affected by a number of factors that are beyond our control such as general geopolitical, economic and business conditions and conditions in the financial services market, which each could materially impact our business, financial condition, cash flows and results of operations. Additionally, many lenders and institutional investors, at times, have reduced funding to borrowers, including other financial institutions. A constriction on future lending by banks or investors could result in higher interest rates on future debt obligations, restrict our ability to obtain sufficient financing to meet our long-term operational and capital needs or limit our ability in the future to consummate strategic acquisitions. Any uncertainty in the credit markets could also negatively impact the ability of our customers and vendors to finance their operations which, in turn, could result in a decline in our sales and in our ability to obtain necessary raw materials and components, thus potentially having an adverse effect on our business, financial condition, cash flows or results of operations.

**Terrorist activity and/or political instability around the world could cause economic conditions to deteriorate and adversely impact our businesses.**

In the past, terrorist attacks have negatively impacted general economic, market and political conditions. Terrorist acts, acts of war or political instability (wherever located around the world) could cause damage or disruption to our business, our facilities or our employees which could significantly impact our business, financial condition or results of operations. The potential for future terrorist attacks, the national and international responses to terrorist attacks, political instability, and other acts of war or hostility, including the recent and current conflicts in Iraq, Afghanistan and the Middle East, have created many economic and political uncertainties, which could adversely affect our business and results of operations in ways that cannot presently be predicted. In addition, with manufacturing facilities located worldwide, including facilities located in North America, Western Europe, Morocco, and India, we may be impacted by terrorist actions not only against the United States but in other parts of the world as well. In some cases, we are not insured for losses and interruptions caused by terrorist acts and acts of war.

### **The coronavirus outbreak could impact our operations.**

Our business and operations could be materially and adversely affected by the effects of a widespread outbreak of a contagious disease, including the recent outbreak of the respiratory illness caused by a coronavirus strain first identified in Wuhan, Hubei Province, China, or any other outbreak of contagious diseases, and other adverse public health developments. These effects could include disruptions or restrictions on our employees' and other service providers' ability to travel, as well as temporary closures of our facilities or the facilities of our customers, suppliers, or other vendors in our supply chain, potentially including single source suppliers.

### **The costs of complying with existing or future environmental regulations and curing any violations of these regulations could increase our expenses or reduce our profitability.**

We are subject to a variety of environmental laws relating to the storage, discharge, handling, emission, generation, use and disposal of chemicals, solid and hazardous waste and other toxic and hazardous materials used to manufacture, or resulting from the process of manufacturing, our products. We cannot predict the nature, scope or effect of future regulatory requirements to which our operations might be subject or the manner in which existing or future laws will be administered or interpreted. Future regulations could be applied to materials, products or activities that have not been subject to regulation previously. The costs of complying with new or more stringent regulations, or with more vigorous enforcement of these or existing regulations, could be significant.

Environmental laws require us to maintain and comply with a number of permits, authorizations and approvals and to maintain and update training programs and safety data regarding materials used in our processes. Violations of these requirements could result in financial penalties and other enforcement actions. We also could be required to halt one or more portions of our operations until a violation is cured. Although we attempt to operate in compliance with these environmental laws, we may not succeed in this effort at all times. The costs of curing violations or resolving enforcement actions that might be initiated by government authorities could be substantial.

### **We have identified material weaknesses in our internal control over financial reporting and those weaknesses have led to a conclusion that our internal control over financial reporting and disclosure controls and procedures were not effective as of December 31, 2019. Our ability to remediate the material weaknesses, our discovery of additional weaknesses, and our inability to achieve and maintain effective disclosure controls and procedures and internal control over financial reporting, could adversely affect our results of operations, our stock price and investor confidence in our company.**

Section 404 of the Sarbanes-Oxley Act of 2002 requires that companies evaluate and report on the effectiveness of their internal control over financial reporting. In addition, we engaged our independent registered public accounting firm to report on its evaluation of those controls. As disclosed in more detail under Item 9A, "Controls and Procedures" below, we have identified three material weaknesses as of December 31, 2019 in our internal control over financial reporting resulting from (i) a lack of a sufficient complement of corporate personnel with appropriate levels of accounting and controls knowledge and experience commensurate with our financial reporting requirements, (ii) a lack of design and effective controls over the analyses, accounting for, and review of non-routine transactions at the corporate level, and (iii) a lack of design and effective controls over the preparation, review and approval of account reconciliations at the corporate level and certain of our shared service locations. Due to the material weaknesses in our internal control over financial reporting, we have also concluded our disclosure controls and procedures were not effective as of December 31, 2019.

Failure to have effective internal control over financial reporting and disclosure controls and procedures could impair our ability to produce accurate financial statements on a timely basis and could lead to a restatement of our financial statements. For example, the identified material weaknesses resulted in immaterial adjustments to the consolidated financial statements for the year ended December 31, 2019 and caused a difference between the financial results we reported in the press release we issued on March 2, 2020 and furnished to the SEC with our Current Report on Form 8-K on the same date and reported in this annual report. If, as a result of the ineffectiveness of our internal control over financial reporting and disclosure controls and procedures, we cannot provide reliable financial statements, our business decision processes may be adversely affected, our business and results of operations could be harmed, investors could lose confidence in our reported financial information and our ability to obtain additional financing, or additional financing on favorable terms, could be adversely affected. In addition, failure to maintain effective internal control over financial reporting could result in sanctions by regulatory authorities.

Our management has taken action to begin remediating the material weaknesses; however, certain remedial actions have not started or have only recently been undertaken, and while we expect to continue to implement our remediation plans throughout the fiscal year ended December 31, 2020, we cannot be certain as to when remediation will be fully completed. Additional details regarding the initial remediation efforts are disclosed in more detail under Item 9A, “Controls and Procedures” below. In addition, we may in the future identify additional internal control deficiencies that could rise to the level of a material weakness or uncover other errors in financial reporting. During the course of our evaluation, we may identify areas requiring improvement and may be required to design additional enhanced processes and controls to address issues identified through this review. In addition, there can be no assurance that such remediation efforts will be successful, that our internal control over financial reporting will be effective as a result of these efforts or that any such future deficiencies identified may not be material weaknesses that would be required to be reported in future periods. In addition, we cannot assure you that our independent registered public accounting firm will be able to attest that such internal controls are effective when they are required to do so.

If we fail to remediate these material weaknesses and maintain effective disclosure controls and procedures or internal control over financial reporting, we may not be able to rely on the integrity of our financial results, which could result in inaccurate or late reporting of our financial results, as well as delays or the inability to meet our reporting obligations or to comply with SEC rules and regulations. The consequences of such failure include delisting actions by the New York Stock Exchange, investigation and sanctions by regulatory authorities and stockholder investigations and lawsuits, any of which could adversely affect our business and the trading price of our common stock.

**Regulations related to “conflict minerals” may cause us to incur additional expenses and could limit the supply and increase the cost of certain metals used in manufacturing our products.**

Under the conflict minerals rule, public companies must disclose whether specified minerals, known as conflict minerals, are necessary to the functionality or production of products manufactured or contracted to be manufactured. The rule requires a disclosure report to be filed by May 31st of each year. The conflict mineral rule could affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products, including tantalum, tin, gold and tungsten. The number of suppliers who provide conflict-free minerals is limited. In addition, there may be material costs associated with complying with the disclosure requirements, such as costs related to determining the source of certain minerals used in our products, as well as costs of possible changes to products, processes, or sources of supply as a consequence of such verification activities. As our supply chain is complex, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the due diligence procedures that we implement, which may harm our reputation. In addition, we may encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so.

## Item 1B. Unresolved Staff Comments

None.

## Item 2. Properties

We maintain 25 major manufacturing facilities worldwide, including operations located in North America, Western Europe, Morocco, China and India. We also maintain sales offices or warehouses from which we ship finished goods to customers, distributors and commissioned representative organizations. Our executive office is located in Burlington, Massachusetts and is leased.

Our Energy segment has major manufacturing facilities located in North America, the United Kingdom, India and Dubai. Properties in South Carolina, Texas, Utah and the United Kingdom are leased. Our Aerospace & Defense segment has major manufacturing facilities located in North America, United Kingdom, France, Morocco and India. Properties in New York and California are leased. Our Industrial segment has major facilities located in North America, Germany, India and China. Properties in Germany, India and China are leased.

Segment	Leased	Owned	Total
Industrial	6	6	12
Aerospace & Defense	1	5	6
Energy	4	3	7
Total	11	14	25

In general, we believe that our properties, including machinery, tools and equipment, are in good condition, are well maintained, and are adequate and suitable for their intended uses. Our manufacturing facilities generally operate five days per week on one or two shifts. We believe our manufacturing capacity could be increased by working additional shifts and weekends and by successful implementation of our CIRCOR Operating System. We also have low-cost sources for manufacturing in India and Morocco which have capacity to fulfill our manufacturing needs. We believe that our current facilities will meet our near-term production requirements without the need for additional facilities.

## Item 3. Legal Proceedings

For information regarding our legal proceedings refer to the first two paragraphs of Note 17, Contingencies, Commitments and Guarantees, to the consolidated financial statements included in this Annual Report, which disclosure is incorporated herein by reference.

## Item 4. Mine Safety Disclosures

Not applicable.

## Part II

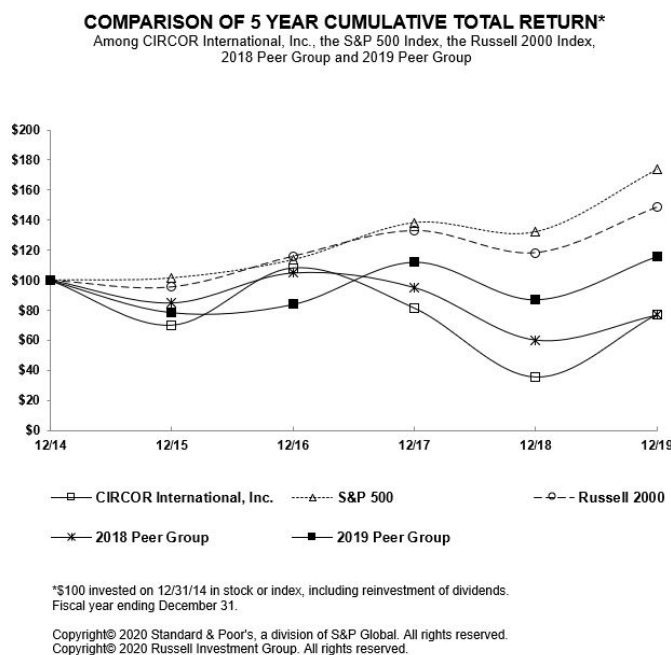
## Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is traded on the New York Stock Exchange ("NYSE") under the symbol "CIR."

Our Board of Directors is responsible for determining our dividend policy. The timing and level of any dividends will necessarily depend on our Board of Directors' assessments of earnings, financial condition, capital requirements and other factors, including restrictions, if any, imposed by our lenders. On February 28, 2018, we announced the suspension of our nominal dividend, as part of our capital deployment strategy.

As of March 2, 2020, there were 19,920,230 shares of our common stock outstanding and we had 54 holders of record of our common stock. We believe the number of beneficial owners of our common stock was substantially greater on that date.

The graph below compares the cumulative 5-Year total return provided shareholders on CIRCOR International, Inc.'s common stock relative to the cumulative total returns of the S&P 500 index, the Russell 2000 index, our previous peer group ("2018 Peer Group") and our updated peer group ("2019 Peer Group"). The companies included in the 2018 Peer Group and the 2019 Peer Group are listed in footnotes 1 and 2 below, respectively. We revised our peer group to incorporate peers relevant to the businesses we acquired in the Fluid Handling acquisition along with divestitures of non-core businesses. An investment of \$100 (with reinvestment of all dividends) is assumed to have been made in our common stock, in each index and in each of the peer groups on December 31, 2014 and its relative performance is tracked through December 31, 2019.



	12/14	12/15	12/16	12/17	12/18	12/19
<b>CIRCOR International, Inc.</b>	<b>\$ 100.00</b>	<b>\$ 70.14</b>	<b>\$ 108.28</b>	<b>\$ 81.47</b>	<b>\$ 35.65</b>	<b>\$ 77.38</b>
<b>S&amp;P 500</b>	<b>100.00</b>	<b>101.38</b>	<b>113.51</b>	<b>138.29</b>	<b>132.23</b>	<b>173.86</b>
<b>Russell 2000</b>	<b>100.00</b>	<b>95.59</b>	<b>115.95</b>	<b>132.94</b>	<b>118.30</b>	<b>148.49</b>
<b>2018 Peer Group</b>	<b>100.00</b>	<b>84.83</b>	<b>104.72</b>	<b>95.00</b>	<b>60.15</b>	<b>76.78</b>
<b>2019 Peer Group</b>	<b>100.00</b>	<b>78.65</b>	<b>84.12</b>	<b>112.27</b>	<b>87.27</b>	<b>116.16</b>

- **2018 Peer Group:** There are three companies included in the Company's 2018 Peer Group which are: Dover Corp, IDEX Corp and Schlumberger NV.
- **2019 Peer Group:** The eight companies included in the Company's 2019 Peer Group are: Alfa Laval Ab, Flowserve Corp, Gardner Denver Holdings Inc, Imi Plc, Metso Oyj, Spx Flow Inc, Sulzer Ag and Weir Group Plc.

## Item 6. Selected Financial Data

The following table presents certain selected financial data that has been derived from our audited consolidated financial statements and related notes and should be read along with the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our audited consolidated financial statements and notes included in this Annual Report.

The consolidated statements of (loss) income for the years ended December 31, 2019, 2018 and 2017, and the consolidated balance sheet data as of December 31, 2019 and 2018 are derived from, and should be read in conjunction with, our audited consolidated financial statements and the related notes included in this Annual Report. The consolidated statements of income for the years ended December 31, 2016 and 2015, and the consolidated balance sheet data as of December 31, 2017, 2016 and 2015, are derived from our consolidated financial statements not included in this Annual Report.

### Selected Financial Data (in thousands, except per share data)

	Years Ended December 31,				
	2019	2018 (2)	2017 (3)	2016 (3)	2015 (3)
<b>Statement of (Loss) Income Data (1):</b>					
Net revenues	\$ 964,313	\$ 1,013,470	\$ 505,492	\$ 380,062	\$ 355,262
Gross profit	308,809	325,203	172,674	137,914	126,265
Operating income (loss)	37,681	21,653	16,307	(5,627)	(12,538)
Net (loss) income	\$ (133,935)	\$ (39,384)	\$ 11,789	\$ 10,101	\$ 9,863
<b>Balance Sheet Data:</b>					
Total assets	\$ 1,470,945	\$ 1,791,612	\$ 1,906,799	\$ 820,756	\$ 669,915
Total debt	636,297	786,037	795,208	251,200	90,500
Shareholders’ equity	391,411	528,993	601,974	404,410	400,777
Total capitalization	\$ 1,027,708	\$ 1,315,030	\$ 1,397,182	\$ 655,610	\$ 491,277
<b>Other Financial Data:</b>					
Diluted earnings per common share	\$ (6.73)	\$ 1.99	\$ 0.70	\$ 0.61	\$ 0.58
Diluted weighted average common shares outstanding	19,903	19,834	16,849	16,536	16,913
Cash dividends declared per common share	\$ —	\$ —	\$ 0.15	\$ 0.15	\$ 0.15

(1) See Note 6, Special and Restructuring charges, net, of the consolidated financial statements included in this Annual Report, for additional details on charges included in the twelve months ended December 31, 2019, December 31, 2018, and December 31, 2017 operating income above. The statement of income data for the year ended December 31, 2016 includes special and restructuring charges, net of \$17.2 million. The statement of income data for the year ended December 31, 2015 includes special and restructuring charges, net of \$14.4 million.

(2) On January 1, 2018, the Company adopted ASU 2014-09, Revenue from Contracts, which had a material impact on revenues during the year ended December 31, 2018. The Company discloses the impact of this change on revenue in Note 2, Summary of Significant Accounting Policies, to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. On January 1, 2018, we adopted ASU 2017-07, Compensation-Retirement Benefits (Topic 715), which had a material impact in 2018. Refer to Note 16, Retirement Plans, to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

(3) On December 11, 2017 we acquired FH, on October 12, 2016 we acquired Critical Flow Solutions, and on April 15, 2015 we acquired Schroedahl.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

See Item 1, Business, for additional detail on forward looking statements.

### **Company Overview**

We design, manufacture and market differentiated technology products and sub-systems for markets including industrial, aerospace and defense, and energy. CIRCOR has a diversified flow and motion control product portfolio with recognized, market-leading brands that fulfill its customers' mission critical needs. See Part 1, Item 1, Business, for additional information regarding the description of our business.

Aerospace and defense end markets are expected to grow as demand for commercial air travel continues to increase and funding on military programs in the U.S. continues to improve in 2020. Capital expenditures in the industrial end markets that we serve are expected to grow modestly, although there are signs of a slowdown in Europe, North America, China and India. We expect to experience lower demand for our products that serve the power generation and stream driven commercial and residential construction markets. We expect continued growth in the downstream and midstream oil and gas markets. We do not expect an improvement in the commercial marine sector as global shipbuilding continues to be constrained, however, we do expect the regulatory environment will cause demand for our products in the commercial marine sector.

We continue to implement actions to mitigate the impact on our earnings from lower demand and increasingly competitive environment. In addition, we are investing in products and technologies designed to help solve our customers' most difficult problems. We expect to further simplify CIRCOR by standardizing technology, reducing facilities, consolidating suppliers and achieving world class operational excellence, including working capital management. We believe our cash flow from operations and financing capacity is adequate to support these activities. Finally, continuing to attract and retain talented personnel, including the enhancement of our global sales, operations, product management and engineering organizations, remains an important part of our strategy during 2020.

### **Basis of Presentation**

All significant intercompany balances and transactions have been eliminated in consolidation. We operate and report financial information using a 52-week fiscal year ending December 31. The data periods contained within our Quarterly Reports on Form 10-Q reflect the results of operations for the 13-week, 26-week and 39-week periods which generally end on the Sunday nearest the calendar quarter-end date. Certain reclassifications have been made to prior period amounts to conform to the current period financial statement presentation, including the results of discontinued operations and reportable segment information.

### **Critical Accounting Policies**

The Company's discussion and analysis of its financial condition and results of operations is based upon its consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent liabilities. On an on-going basis, management evaluates its significant estimates, including those related to contracts accounted for under the percentage of completion method, bad debts, inventories, intangible assets and goodwill, purchase accounting, delivery penalties, income taxes, and contingencies including litigation. Management believes the most complex and sensitive judgments, because of their significance to the consolidated financial statements, result primarily from the need to make estimates about the effects of matters that are inherently uncertain. Management bases its estimates on historical experience, current market and economic conditions and other assumptions that management believes are reasonable. The results of these estimates form the basis for judgments about the carrying value of assets and liabilities where the values are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

There have been no significant changes from the methodology applied by management for critical accounting estimates previously disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. For information regarding our significant accounting policies, refer to Note 2, Summary of Significant Accounting Policies, to the consolidated financial statements included in this Annual Report, which disclosure is incorporated by reference herein.

For goodwill, we perform an impairment assessment at the reporting unit level on an annual basis as of our October month end or more frequently if circumstances warrant. In October 2019 when we performed our impairment assessment, the fair value of each of our reporting units exceeded the respective carrying amount, and no goodwill impairments were recorded. The fair values utilized for our 2019 goodwill assessment exceeded the carrying amounts by more than 20% for our Energy, Aerospace

& Defense, and Industrial reporting units, respectively. The growth rate assumptions utilized were consistent with growth rates within the markets that we serve. If our results significantly vary from our estimates, related projections, or business assumptions in the future due to change in industry or market conditions, we may be required to record impairment charges.

## Results of Operations

### 2019 Compared With 2018

#### Consolidated Operations

(in thousands)	2019	2018	Total Change	Divestiture	Operations	Foreign Exchange
<b>Net Revenues</b>						
Industrial	\$ 450,706	\$ 487,576	\$ (36,870)	\$ (18,537)	\$ (1,203)	\$ (17,130)
Aerospace & Defense	272,625	237,017	35,608	—	39,133	(3,525)
Energy	240,982	288,877	(47,895)	(62,507)	16,483	(1,871)
Consolidated Net Revenues	<u>\$ 964,313</u>	<u>\$ 1,013,470</u>	<u>\$ (49,157)</u>	<u>\$ (81,044)</u>	<u>\$ 54,413</u>	<u>\$ (22,526)</u>

Net revenues in 2019 were \$964.3 million, a decrease of \$(49.2) million from 2018 primarily driven by lower revenue as a result of divestitures \$(81.0) million and unfavorable foreign exchange of \$(22.5) million, partially offset by operational growth in all segments of \$54.4 million.

#### Segment Results

The Chief Operating Decision Maker ("CODM") is the function that allocates the resources of the enterprise and assesses the performance of the Company's reportable operating segments. CIRCOR has determined that the CODM is solely comprised of its Chief Executive Officer ("CEO"), as the CEO has the ultimate responsibility for CIRCOR strategic decision-making and resource allocation.

Our CODM evaluates segment operating performance using segment operating income. We define segment operating income as GAAP operating income excluding intangible amortization and amortization of fair value step-ups of inventory and fixed assets from acquisitions completed subsequent to December 31, 2011, the impact of restructuring related inventory write-offs, impairment charges and special charges or gains. The Company also refers to this measure as adjusted operating income. The Company uses this measure because it helps management understand and evaluate the segments' core operating results and facilitates a comparison of performance for determining incentive compensation achievement.

For information regarding our segment determination refer to Note 19, Business Segment and Geographical Information, of the consolidated financial statements included in this Annual Report.

The following tables present information on net revenues and operating income of our business segments, along with a reconciliation of total segment operating income to the Company's consolidated operating income.



(in thousands)	2019	2018	Change
<b>Net Revenues</b>			
Industrial	\$ 450,706	\$ 487,576	\$ (36,870)
Aerospace & Defense	272,625	237,017	35,608
Energy	240,982	288,877	(47,895)
Consolidated Net Revenues	<u>\$ 964,313</u>	<u>\$ 1,013,470</u>	<u>\$ (49,157)</u>
<b>Operating Income</b>			
Industrial - Segment Operating Income	\$ 52,188	\$ 57,340	\$ (5,152)
Aerospace & Defense - Segment Operating Income	52,480	36,047	16,433
Energy - Segment Operating Income	30,394	38,779	(8,385)
Corporate expenses	(25,262)	(30,299)	5,037
Subtotal	109,800	101,867	7,933
Restructuring charges, net	5,186	5,848	(662)
Special charges, net	17,686	13,061	4,625
Special and restructuring charges, net (1)	22,872	18,909	3,963
Restructuring related inventory charges (1)	(820)	346	(1,166)
Amortization of inventory step-up	—	6,600	(6,600)
Acquisition amortization	45,715	47,310	(1,595)
Acquisition depreciation	4,352	7,049	(2,697)
Restructuring and other costs	49,247	61,305	(12,058)
Consolidated Operating Income	<u>\$ 37,681</u>	<u>\$ 21,653</u>	<u>\$ 16,028</u>
Consolidated Operating Margin	3.9%	2.1%	

(1) See Note 6, Special and Restructuring charges, net of the consolidated financial statements included in this Annual Report, for additional details.

#### Industrial Segment

(in thousands, except percentages)	2019	2018	Change
Net Revenues as reported	\$ 450,706	\$ 487,576	\$ (36,870)
Net Revenues excluding divestiture (1)	437,227	455,560	(18,333)
Segment Operating Income as reported	52,188	57,340	(5,152)
Segment Operating Income excluding divestiture (2)	48,701	51,642	(2,941)
Segment Operating Margin (adjusted)	11.1%	11.3%	
Orders	\$ 447,439	\$ 510,115	\$ (62,676)

(1) Adjusted for the August 2019 divestiture of certain assets and liabilities related to our Spence and Nicholson product lines and the October 2018 divestiture of our Rosscor B.V. and SES International B.V. subsidiaries (the "Delden Business"). The Spence and Nicholson components generated revenues of \$13.5 million and \$20.7 million for the year ended December 31, 2019 and December 31, 2018, respectively. The Delden business generated revenues of \$0.0 million and \$11.3 million for the year ended December 31, 2019, and December 31, 2018, respectively.

(2) Adjusted for the August 2019 divestiture of certain assets and liabilities related to our Spence and Nicholson product lines, which contributed \$3.5 million and \$6.4 million to segment operating income for the year ended December 31, 2019 and December 31, 2018, respectively, and for the divestiture of the Delden business, which contributed \$0.0 million and (\$0.7) million to segment operating income for the year ended December 31, 2019, and December 31, 2018, respectively.

Industrial segment net revenues, excluding divestitures, decreased \$18.3 million, or (-4%), in 2019 compared to 2018. The decrease was primarily driven by timing of projects in Europe and North American Pumps businesses ("Pumps Businesses") of (-4%).

Segment operating income, excluding divestitures, decreased \$2.9 million, or (-6%), to \$48.7 million for 2019 compared to \$51.6 million for 2018, primarily driven by the Pumps Businesses (-14%), partially offset by the Valves businesses (+6%) along with operational efficiencies in headquarters.

Industrial segment orders, excluding divestitures, decreased \$62.7 million, or (-12%), to \$446.7 million for 2019 as compared to \$510.1 million in 2018, driven by declines within our Pumps Businesses (-9%) and Valves Businesses (-3%).

#### QUARTERLY INDUSTRIAL SEGMENT INFORMATION

(in thousands, except percentages)

(unaudited)

	2018					2019				
	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
Orders	136,607	136,746	114,876	121,886	510,115	123,746	120,660	105,710	97,323	447,439
Net Revenues	117,131	131,064	118,734	120,647	487,576	110,738	119,322	113,596	107,050	450,706
Operating Income	12,948	15,037	14,609	14,746	57,340	10,787	16,138	13,953	11,310	52,188
Operating Margin	11.1%	11.5%	12.3%	12.2%	11.8%	9.7%	13.5%	12.3%	10.6%	11.6%
Backlog (1)	170,568	167,325	178,044	163,801	163,801	174,228	175,717	159,056	152,084	152,084

(1) At end of period.

#### Aerospace & Defense Segment

(in thousands, except percentages)	2019	2018	Change
Net Revenues	\$ 272,625	\$ 237,017	\$ 35,608
Segment Operating Income	52,480	36,047	16,433
Segment Operating Margin	19.2%	15.2%	
Orders	\$ 313,939	\$ 277,469	\$ 36,470

Aerospace & Defense segment net revenues increased by \$35.6 million, or 15%, in 2019 as compared to 2018. The increase was driven by our Defense businesses (+10%) and our Aerospace businesses (+5%).

Segment operating income increased \$16.4 million, or 46%, to \$52.5 million for 2019 compared to \$36.0 million for 2018. The increase in operating income was driven by our Defense businesses (+25%) and our Aerospace businesses (21%).

Aerospace & Defense segment orders increased \$36.5 million, or 13%, to \$313.9 million for 2019 compared to \$277.5 million in 2018, driven by our Defense businesses (+10%) and our Aerospace businesses (+3%).

## QUARTERLY A&D SEGMENT INFORMATION

(in thousands, except percentages)

(unaudited)

	2018					2019				
	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
Orders	59,793	59,441	81,533	76,702	277,469	88,107	93,405	63,968	68,459	313,939
Net Revenues	58,477	57,500	57,757	63,283	237,017	61,240	64,694	67,621	79,070	272,625
Operating Income	8,931	6,992	8,709	11,415	36,047	9,374	10,443	13,564	19,099	52,480
Operating Margin	15.3%	12.2%	15.1%	18.0%	15.2%	15.3%	16.1%	20.1%	24.2%	19.2%
Backlog (1)	165,841	152,081	150,571	156,256	156,256	206,457	234,964	206,917	194,459	194,459

(1) At end of period.

### Energy Segment

(in thousands, except percentages)

	2019	2018	Change
Net Revenues as reported	\$ 240,982	\$ 288,877	\$ (47,895)
Net Revenues excluding divestiture (1)	237,876	223,264	\$ 14,612
Segment Operating Income as reported	30,394	38,779	(8,385)
Segment Operating Income excluding divestiture (2)	30,394	32,183	(1,789)
Segment Operating Margin (adjusted)	12.8%	14.4%	
Orders	\$ 216,114	\$ 311,626	\$ (95,512)

(1) Adjusted for the January 2019 divestiture of our Reliability Services business, which generated revenues of \$3.1 million and \$65.6 million for the years ended December 31, 2019 and December 31, 2018, respectively.

(2) Adjusted for the January 2019 divestiture of our Reliability Services business, which contributed \$0.0 million and \$6.6 million to segment operating income for the years ended December 31, 2019 and December 31, 2018, respectively.

Energy segment net revenues, excluding divestiture, increased \$14.6 million, or 7%, in 2019 compared to 2018. The increase was primarily driven by organic growth in our Refinery Valves business (+7%) and Pipeline business (+2%), partially offset by declines within our Instrumentation and Sampling business (-1%), and unfavorable foreign currency fluctuations (-1%). The Instrumentation and Sampling business was sold in January 2020. See Note 1, Description of Business, of the consolidated financial statements included in this Annual Report.

Segment operating income, excluding divestiture, decreased \$1.8 million, or (-6%), to \$30.4 million for 2019 compared to \$32.2 million in 2018.

Energy segment orders decreased \$95.5 million, or (-31%), to \$216.1 million for 2019 compared to \$311.6 million in 2018, primarily driven by the divestiture of our Reliability Services business (-21%) and in comparison to a strong 2018 order book within our Refinery Valves business (-9%).

## QUARTERLY ENERGY SEGMENT INFORMATION

(in thousands, except percentages)

(unaudited)

	2018					2019				
	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
Orders	85,336	66,825	87,146	72,319	311,626	48,088	43,982	53,276	70,768	216,114
Net Revenues	64,279	71,094	70,718	82,786	288,877	66,876	61,752	55,835	56,519	240,982
Operating Income	5,627	10,691	9,726	12,735	38,779	9,978	8,343	5,286	6,787	30,394
Operating Margin	8.8%	15.0%	13.8%	15.4%	13.4%	14.9%	13.5%	9.5%	12.0%	12.6%
Backlog (1)	112,336	106,190	121,600	110,498	110,498	80,714	62,364	59,309	74,124	74,124

(1) at end of period.

### *Corporate Expenses*

Corporate expenses decreased \$5.0 million to \$25.3 million for 2019. This decrease was primarily driven by ongoing cost savings initiatives resulting in lower professional fees, variable compensation and integration costs.

### *Special and Restructuring charges, net*

During 2019, the Company recorded a total of \$22.9 million of Special and restructuring charges. In our consolidated statements of (loss) income, these charges are recorded in Special and restructuring charges, net. These costs are primarily related to our simplification and restructuring efforts, as well as cost relating to an unsolicited tender offer to acquire the Company. These restructuring charges and other special charges are described in further detail in Note 6, Special and Restructuring charges, net, of the consolidated financial statements included in this Annual Report.

### *Restructuring and other costs*

During 2019, the Company recorded a total of \$49.2 million of Restructuring and other costs. These charges represent plant, property, and equipment depreciation related to the step-up in fair value as part of our acquisition of Colfax Corporation's Fluid Handling ("FH") business, intangible amortization in connection with acquisitions subsequent to December 31, 2011, and step-up in fair value of inventory acquired as part of our FH acquisition. These charges are recorded in either selling, general and administrative expenses or cost of revenues based upon the nature of the underlying asset.

### *Interest Expense, Net*

Interest expense decreased \$4.4 million to \$48.6 million for 2019. The change in interest expense was primarily due to lower debt balances, and our net investment hedge, partially offset by an increase in interest rates.

### *Other Income, Net*

Other income, net, was \$0.8 million for 2019 compared to \$7.4 million in 2018. The difference of \$6.6 million primarily relates to net pension income for the retirement plans we acquired as part of the FH acquisition. Effective January 1, 2018 all pension gains and losses are recorded in the Other (Income) Expense, net caption on our consolidated statement of (loss) income. In addition we experienced lower gains from foreign exchange in 2019 compared to 2018.

### *Comprehensive (Loss) Income*

Comprehensive loss increased \$72.1 million, from a comprehensive loss position of \$72.4 million for the year-ended December 31, 2018 to a comprehensive loss position of \$144.5 million for the year-ended December 31, 2019. This change was primarily driven by an increase in net loss of \$103.1 million in our discontinued operations, partially offset by \$15.8 million of lower negative effects of foreign currency translation, and reduced losses in our continuing operations of \$8.6 million, as compared to the prior year.

As of December 31, 2019, we had a cumulative currency translation adjustment of \$18.2 million regarding our Brazil entity. If we were to cease to have a controlling financial interest in the Brazil entity, we would incur a non-cash charge of \$18.2 million, which would be included as a special charge within the consolidated statements of (loss) income.

*(Benefit from) Provision for Income Taxes*

The table below outlines the change in effective tax rate for 2019 and 2018 (in thousands, except percentages).

	2019	2018	Change
Income/ (Loss) Before Tax	\$(10,092)	\$(23,896)	\$13,804
US tax rate	21.0%	21.0%	—%
State taxes	15.5%	3.8%	11.7%
US permanent differences	(1.6)%	(1.0)%	(0.6)%
Foreign tax rate differential	(26.0)%	(7.6)%	(18.4)%
Unbenefited foreign losses	(0.5)%	(5.5)%	5.0%
Global intangible low-taxed income ("GILTI") impact	(3.9)%	(20.7)%	16.8%
Intercompany financing	30.4%	12.7%	17.7%
Foreign tax credit write off	—%	(45.6)%	45.6%
Tax reserve	(0.3)%	1.3%	(1.6)%
Rate change	5.9%	—%	5.9%
Foreign-derived intangible income ("FDII")	10.7%	0.1%	10.6%
Dispositions	(227.0)%	—%	(227.0)%
Prior period adjustment	44.1%	4.3%	39.8%
Equity compensation	(10.8)%	(4.2)%	(6.6)%
R&D credits	13.1%	2.7%	10.4%
Other	(16.0)%	(0.8)%	(15.2)%
Total	<u>(145.4)%</u>	<u>(39.5)%</u>	<u>(105.9)%</u>

## Results of Operations

### 2018 Compared With 2017

#### Consolidated Operations

(in thousands)	2018	2017	Total Change	Acquisitions	Operations	Foreign Exchange
<b>Net Revenues</b>						
Industrial	\$ 487,576	\$ 139,110	\$ 348,466	\$ 344,456	\$ 1,911	\$ 2,099
Aerospace & Defense	237,017	182,983	54,034	46,929	4,669	2,436
Energy	288,877	183,399	105,478	57,290	47,068	1,120
Consolidated Net Revenues	<u>\$ 724,593</u>	<u>\$ 322,093</u>	<u>\$ 402,500</u>	<u>\$ 391,385</u>	<u>\$ 6,580</u>	<u>\$ 4,535</u>

Net revenues in 2018 were \$1.0 billion, an increase of \$508.0 million from 2017. The increase in net revenue was primarily driven by our acquisition of the FH business, which contributed \$448.7 million in net revenues, along with operations increases of \$53.6 million and favorable foreign exchange increase of \$5.7 million.

#### Segment Results

The following table present information on net revenues and operating income of our business segments, along with a reconciliation of total segment operating income to the Company's consolidated operating income.

(in thousands)	2018	2017	Change
<b>Net Revenues</b>			
Industrial	\$ 487,576	\$ 139,110	\$ 348,466
Aerospace & Defense	237,017	182,983	54,034
Energy	288,877	183,399	105,478
Consolidated Net Revenues	<u>\$ 1,013,470</u>	<u>\$ 505,492</u>	<u>\$ 507,978</u>

<b>Operating Income</b>			
Industrial - Segment Operating Income	\$ 57,340	\$ 19,932	\$ 37,408
A&D - Segment Operating Income	36,047	23,375	12,672
Energy - Segment Operating Income	38,779	21,708	17,071
Corporate expenses	(30,299)	(21,744)	(8,555)
Subtotal	101,867	43,271	58,596
Restructuring charges, net	5,848	2,559	3,289
Special charges, net	13,061	7,330	5,731
Special and restructuring charges, net (1)	18,909	9,889	9,020
Restructuring related inventory charges (1)	346	—	346
Amortization of inventory step-up	6,600	4,300	2,300
Impairment charges	—	—	—
Acquisition amortization	47,310	12,542	34,768
Acquisition depreciation	7,049	233	6,816
Restructuring and other cost, net	61,305	17,075	44,230
Consolidated Operating Income	<u>\$ 21,653</u>	<u>\$ 16,307</u>	<u>\$ 5,346</u>
Consolidated Operating Margin	2.1%	3.2%	

(1) See Note 6, Special and Restructuring charges, net of the consolidated financial statements, for additional details.

Refer to our Annual Report Form 10-K filed with the SEC on March 1, 2019 for further discussion of our 2018 results in comparison with 2017.

### *Corporate Expenses*

Corporate expenses increased \$8.6 million to \$30.3 million for 2018. This increase was primarily driven by higher variable compensation costs, professional fees and integration costs.

### *Special and Restructuring charges, net and other charges*

During 2018, the Company recorded a total of \$18.9 million of Special and restructuring charges. In our consolidated statement of (loss) income, these charges are recorded in Special and restructuring charges, net. These costs are primarily related to our simplification and restructuring efforts. These restructuring charges and other special charges are described in further detail in Note 6, Special and Restructuring charges, net, of the consolidated financial statements included in this Annual Report.

### *Restructuring and other costs*

During 2018, the Company recorded a total of \$61.3 million of Restructuring and other costs. These charges represent plant, property, and equipment depreciation related to the step-up in fair value as part of our FH acquisition, intangible amortization in connection with acquisitions subsequent to December 31, 2011, and step-up in fair value of inventory acquired as part of our FH acquisition. These charges are recorded in either selling, general, and administrative expenses or cost of revenues based upon the nature of the underlying asset.

### *Interest Expense, Net*

Interest expense increased \$42.1 million to \$52.9 million for 2018. This change in interest expense was primarily due to higher outstanding debt balances as a result of our acquisition of FH during the fourth quarter of 2017.

### *Other (Income) Expense, Net*

Other income, net, was \$7.4 million for 2018 compared to other expense, net of \$1.8 million in 2017. The difference of \$9.3 million primarily relates to net pension income for the retirement plans we acquired as part of the FH acquisition. Effective January 1, 2018 all pension gains and losses are to be recorded in the Other (Income) Expense, net caption on our consolidated statement of (loss) income. In addition, we had gains resulting from changes in foreign currency in 2018, whereas in 2017 we had losses resulting from changes in foreign currency.

### *Comprehensive (Loss) Income*

Comprehensive (loss) income decreased \$123.7 million, from comprehensive income of \$51.3 million for the year-ended December 31, 2017 to comprehensive loss of \$(72.4) million for the year-ended December 31, 2018. This decrease is primarily driven by a year-over-year decrease of \$55 million in foreign currency translation, as the Company had \$(21) million in unfavorable foreign currency translation in 2018 compared to favorable foreign currency translation of \$34 million in 2017, and a \$51 million year-over-year decrease in net (loss) income.

### *(Benefit from) Provision for Income Taxes*

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act includes significant changes to the U.S. corporate income tax system including: a federal corporate rate reduction from 35% to 21%; limitations on the deductibility of interest expense and executive compensation; creation of the base erosion anti-abuse tax ("BEAT"), a new minimum tax; global intangible low-taxed income ("GILTI"); and the transition of U.S. international taxation from a worldwide tax system to a modified territorial tax system. The change to a modified territorial tax system resulted in a one-time U.S. tax liability on those earnings which have not previously been repatriated to the U.S. (the "Transition Tax"), with future distributions not subject to U.S. federal income tax when repatriated. A majority of the provisions in the Tax Act are effective January 1, 2018 and have been reflected in our financial statements. With respect to GILTI, the Company has adopted a policy to account for this provision as a period cost.

In response to the Tax Act, the SEC staff issued guidance on accounting for the tax effects of the Tax Act. The guidance provided a one-year measurement period for companies to complete the accounting.

In connection with the impact of the Tax Act, we had recorded a \$0.5 million net tax benefit for the period ended December 31, 2017. This benefit consists of zero net expense for the Transition Tax liability, and \$0.5 million benefit from the remeasurement of our deferred tax assets/liabilities due to the corporate rate reduction. The Company did not owe the one-time Transition Tax

liability, based on foreign tax pools that are in excess of U.S. tax rates. The impact of the Tax Act resulted in a valuation allowance on a portion of our U.S. foreign tax credit carryforwards (deferred tax asset), in the amount of \$10.9 million of expense which was recorded in 2018.

The table below outlines the change in effective tax rate for 2018 and 2017 (in thousands, except percentages).

	2018	2017	Change
Income/ (Loss) Before Tax	\$(23,896)	\$3,640	\$(27,536)
US tax rate	21.0%	35.0%	(14.0)%
State taxes	3.8%	(5.7)%	9.5%
US permanent differences	(1.0)%	22.7%	(23.7)%
Foreign tax rate differential	(7.6)%	(66.4)%	58.8%
Unbenefited foreign losses	(5.5)%	—%	(5.5)%
Rate change	—%	(13.9)%	13.9%
GILTI impact	(20.7)%	—%	(20.7)%
FDII	0.1%	—%	0.1%
Dispositions	—%	4.7%	(4.7)%
Foreign tax credit writeoff	(45.6)%	—%	(45.6)%
Tax reserve	1.3%	(27.0)%	28.3%
Prior period adjustment	4.3%	(0.6)%	4.9%
R&D	2.7%	(14.0)%	16.7%
Equity compensation	(4.2)%	(2.7)%	(1.5)%
Intercompany financing	12.7%	(17.8)%	30.5%
Release of contingent consideration	—%	(113.9)%	113.9%
Other	(0.8)%	3.9%	(4.7)%
Total	(39.5)%	(195.7)%	156.2%



## Liquidity and Capital Resources

Our liquidity needs arise primarily from capital investment in machinery, equipment and the improvement of facilities, funding working capital requirements to support business growth initiatives, acquisitions, and debt service costs. We have historically generated cash from operations and remain in a strong financial position, with resources available for reinvestment in existing businesses, strategic acquisitions and managing our capital structure on a short and long-term basis.

We completed the acquisition of FH on December 11, 2017. The total consideration paid to acquire FH consisted of \$542 million in cash, 3,283,424 unregistered shares of our common stock and the assumption of net pension and post-retirement liabilities of FH. We financed the cash consideration through a combination of committed debt financing and cash on hand. Refer to Note 5, Business Acquisitions, of the consolidated financial statements included in this Annual Report, for details. As a result of the transaction we incurred significant debt, including secured indebtedness, as described below. Since January 2017, we have completed several asset sales with proceeds over \$340 million. Net proceeds from these transactions have been used to reduce indebtedness as described below.

The following table summarizes our cash flow activities for the year-ended indicated (in thousands):

	2019	2018	2017
Cash flow provided by (used in):			
Operating activities	\$ 15,913	\$ 53,994	\$ 9,637
Investing activities	153,036	(16,877)	(502,124)
Financing activities	(152,944)	(74,073)	535,568
Effect of exchange rate changes on cash and cash equivalents	197	(5,812)	8,996
Increase (decrease) in cash and cash equivalents (1)	\$ 16,202	\$ (42,768)	\$ 52,077

(1) Pursuant to the terms of the FH purchase agreement, \$64.5 million of the cash balance as of December 31, 2017 was due back to Colfax Corporation ("Colfax"), which has been reflected as a current liability within the December 31, 2017 balance sheet. Amounts were fully settled during 2018.

### Cash Flow Activities for the Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

During the year ended December 31, 2019, we generated \$15.9 million in cash flow from operating activities compared to \$54.0 million during the year ended December 31, 2018. The \$38.1 million decrease in operating cash was primarily driven by higher cash taxes, higher working capital and cash used by discontinued operations.

During the year ended December 31, 2019, we generated \$153.0 million for investing activities compared to cash used of \$16.9 million during the year ended December 31, 2018. The \$169.9 million year over year increase in cash provided was primarily driven by cash proceeds from the sale of certain assets and liabilities related to Spence and Nicholson products lines for \$84.5 million and the sale of the RS business for approximately \$85 million.

During the year ended December 31, 2019, we used \$152.9 million in cash from financing activities as compared to cash used of \$74.1 million during the year ended December 31, 2018. The \$78.9 million year over year increase in cash used by financing activities resulted from payments to reduce long-term debt.

As of December 31, 2019, total debt (including current portion) was \$636.3 million compared to \$786.0 million at December 31, 2018. Total debt is net of unamortized term loan debt issuance costs of \$17.6 million and \$21.0 million at December 31, 2019 and 2018, respectively. Total debt as a percentage of total shareholders' equity was 163% as of December 31, 2019 compared to 149% as of December 31, 2018. As of December 31, 2019, we had available capacity to borrow an additional \$115.7 million under our revolving credit facility.

As of December 31, 2019, we had borrowings of \$636.3 million outstanding under our credit facility and \$42.0 million outstanding under letters of credit.

We were in compliance with all financial covenants related to our existing debt obligations at December 31, 2019 and we believe it is likely that we will continue to meet such covenants for at least the next twelve months from date of issuance of the financial statements.

The ratio of current assets to current liabilities was 2.4:1 at December 31, 2019 compared to 2.3:1 at December 31, 2018. As of December 31, 2019, cash and cash equivalents totaled \$84.5 million and was substantially all held in foreign bank accounts. This compares to \$68.5 million of cash and cash equivalents as of December 31, 2018, with balances all substantially held in foreign bank accounts. The cash and cash equivalents located at our foreign subsidiaries may not be repatriated to the United States or other jurisdictions without significant tax implications. On a provisional basis, the Company does not expect to owe the one-time Transition Tax liability, based on foreign tax pools that are in excess of U.S. tax rates. We believe that our U.S. based subsidiaries, in the aggregate, will generate positive operating cash flows and in addition we may utilize our Credit Agreement for U.S. based cash needs.

In 2020, we expect to generate positive cash flow from operating activities sufficient to support our capital expenditures and service our debt. Based on our expected cash flows from operations and contractually available borrowings under our credit facility, we expect to have sufficient liquidity to fund working capital needs and future growth over at least the next twelve months from date of filing the 2019 financial statements.

In March 2020, the World Health Organization declared the outbreak of COVID-19, which continues to spread throughout the U.S. and the world, as a pandemic. The outbreak is having an impact on the global economy, resulting in rapidly changing market and economic conditions, which may impact the Company. Subsequent to year end and through the date of this filing, the Company has experienced a significant decline in its market capitalization to approximately 35% (based on the closing market price at March 26, 2019) below its consolidated book value. As a result, management has concluded that there was a goodwill and an intangible asset impairment triggering event for the Company in the first quarter of 2020, which will result in management performing an impairment evaluation of its goodwill and intangible asset balances. The decline in market capitalization and any prolonged material disruption of our employees, distributors, suppliers or customers can reasonably be expected to negatively impact our global sales and operating results and could lead to valuation allowances or impairments of our goodwill or intangible assets, which were 271.9 million and 385.5 million million, respectively, as of December 31, 2019.

Given the continued uncertainty surrounding COVID-19, on March 20, 2020, the Company executed an \$80 million drawdown of its remaining available line of credit under its existing Credit Agreement. The Company took this action as a precautionary measure to increase the Company's cash position and help maintain financial flexibility. The proceeds from the drawdown will be available to be used for working capital, general corporate or other purposes.

On February 26, 2020, the Company amended its term loan to lower the interest rate associated with the applicable margin calculation. The new terms lower the interest rate on the Company's term loan from LIBOR plus an applicable margin of 3.5% to LIBOR plus an applicable margin of 3.25%, based on its existing corporate family rating from Moody's. The applicable margin reduces to LIBOR plus an applicable margin of 3.00%, with a corporate family rating from Moody's of B1 or better.

During the fourth quarter of 2019, the Company entered into a definitive agreement to sell its non-core Instrumentation and Sampling ("I&S") business to Crane Co. for \$172 million, in cash, subject to working capital adjustments. The transaction closed on January 31, 2020. The I&S business manufactures valves, fittings, regulators and sampling systems primarily serving energy end markets. We expect to record a gain on the I&S sale during the first quarter of 2020 in the range of \$35 million to \$40 million.

#### **Cash Flow Activities for the Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017**

During the year ended December 31, 2018, we generated \$54.0 million in cash flow from operating activities compared to \$9.6 million during the year ended December 31, 2017. The \$44.4 million increase in operating cash was primarily driven by \$26.9 million of working capital changes primarily due to improved management of inventory and cash collection on outstanding trade receivables and higher cash related earnings of \$17.5 million.

During the year ended December 31, 2018, we used \$16.9 million for investing activities as compared to \$502.1 million during the year ended December 31, 2017. The \$485.2 million year over year decrease in cash used was primarily driven by our purchase of the FH business in December of 2017.

During the year ended December 31, 2018, we used \$74.1 million from financing activities as compared to cash generated of \$535.6 million during the year ended December 31, 2017. The \$609.6 million year over year decrease in cash generated from financing activities was primarily related to our purchase of the FH business. On December 11, 2017, we borrowed \$785.0 million under a new term loan and entered into a new \$150.0 million revolving line of credit on which we drew \$40.0 million.

Proceeds from these borrowings were used to fund the acquisition of FH and repay \$97.5 million and \$176.0 million of outstanding debt under our previous term loan and revolving line of credit, respectively.

As of December 31, 2018, total debt (including current portion) was \$786.0 million compared to \$795.2 million at December 31, 2017. Total debt is net of unamortized term loan debt issuance costs of \$21.0 million and \$23.7 million at December 31, 2018 and 2017, respectively. Total debt as a percentage of total shareholders' equity was 149% as of December 31, 2018 compared to 132% as of December 31, 2017. As of December 31, 2018, we had available capacity to borrow an additional \$84.5 million under our revolving credit facility.

As a result of a significant portion of our cash balances being denominated in Euros, the strengthening of the U.S. Dollar resulted in a \$5.8 million increase in reported cash balances.

As of December 31, 2018, we had borrowings of \$786.0 million outstanding under our credit facility and \$70.7 million outstanding under letters of credit.

We were in compliance with all financial covenants related to our existing debt obligations at December 31, 2018.

The ratio of current assets to current liabilities was 2.3:1 at December 31, 2018 compared to 2.0:1 at December 31, 2017. As of December 31, 2018, cash and cash equivalents totaled \$68.5 million and was substantially all held in foreign bank accounts. This compares to \$110.4 million of cash and cash equivalents as of December 31, 2017, of which \$65.3 million was payable to Colfax Corporation with balances all substantially held in foreign bank accounts. The cash and cash equivalents located at our foreign subsidiaries may not be repatriated to the United States or other jurisdictions without significant tax implications. On a provisional basis, the Company does not expect to owe the one-time Transition Tax liability, based on foreign tax pools that are in excess of U.S. tax rates. We believe that our U.S. based subsidiaries, in the aggregate, will generate positive operating cash flows and in addition we may utilize our Credit Agreement for U.S. based cash needs.

### Significant Contractual Obligations and Commercial Commitments

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2019 that affect our liquidity:

	Payments due by Period				
	Total (1)	Less Than 1 Year	1 – 3 Years	3 – 5 Years	More than 5 years
<b>Contractual Cash Obligations:</b>	(in thousands)				
Long-term debt, less current portion	\$ 653,850	\$ —	\$ —	\$ 653,850	\$ —
Interest payments on debt	154,130	34,777	64,055	55,298	—
Operating leases	21,193	3,994	6,332	4,033	6,834
Total contractual cash obligations	<u>\$ 829,173</u>	<u>\$ 38,771</u>	<u>\$ 70,387</u>	<u>\$ 713,181</u>	<u>\$ 6,834</u>
<b>Commercial Commitments:</b>					
U.S. standby letters of credit	\$ 34,329	\$ 23,060	\$ 11,269	\$ —	\$ —
International standby letters of credit	7,661	4,176	2,236	944	305
Commercial contract commitments	116,733	103,795	10,129	2,184	625
Total commercial commitments	<u>\$ 158,723</u>	<u>\$ 131,031</u>	<u>\$ 23,634</u>	<u>\$ 3,128</u>	<u>\$ 930</u>

In accordance with the authoritative guidance for accounting for uncertainty in income taxes, as of December 31, 2019, we had unrecognized tax benefits of \$0.6 million, including \$0.0 million of accrued interest. The Company does not expect the unrecognized tax benefits to change over the next 12 months.

Our commercial contract commitments primarily relate to open purchase orders of \$107.3 million, \$7.5 million of which extend to 2020 and beyond.

During the fiscal year ended December 31, 2019, we made cash contributions of approximately \$0.8 million to our U.S. plans and \$4.3 million for our foreign plans. During the fiscal year ended December 31, 2018, we did not make any cash contributions to our qualified defined benefit plan, but made \$0.4 million in payments for our nonqualified plans. During the fiscal year ended December 31, 2017, we contributed \$0.8 million to our qualified defined benefit U.S. plans, \$0.4 million to

our nonqualified supplemental plan, and \$0.2 million for our non-U.S. plans. In addition, we made \$3.4 million, \$1.8 million, \$2.0 million in payments to our 401(k) savings plan for 2019, 2018 and 2017, respectively.

In 2020, we expect to make defined benefit plan contributions based on the minimum required funding in accordance with statutory requirements. The estimates for plan funding for future periods may change as a result of the uncertainties concerning the return on plan assets, the number of plan participants, and other changes in actuarial assumptions. We anticipate fulfilling these commitments through our generation of cash flow from operations.

### **Off-Balance Sheet Arrangements**

Through December 31, 2019, we have not entered into any off-balance sheet arrangements or material transactions with unconsolidated entities or other persons that have, or are reasonably likely to have, a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources that is material to investors.

## **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

### **Market Risk**

Business performance in the oil & gas refining sector is largely tied to refining margins, which are also driven by the market price of crude oil and gasoline demand. Seasonal factors such as hurricanes and peak gasoline demand in the summer months may also drive high crack spread margins. During periods when high crack spread margins exist, refineries prefer to operate continuously at full capacity. Refiners may decide to delay planned maintenance (commonly called “unit turnarounds”) during these periods to maximize their returns. Refining crack spread margins moderated in 2018, which resulted in unit turnarounds. As a result, the timing of major capital projects in our severe service refinery valves business were impacted. While planned maintenance and unit turnarounds are necessary for safe and efficient operation of the refineries, project timing driven by these factors may continue to create fluctuations in our performance.

### **Foreign Currency Exchange Risk**

The Company is exposed to certain risks relating to its ongoing business operations including foreign currency exchange rate risk and interest rate risk. During 2019, the Company entered into a cross-currency swap (“cross-currency swap”) agreement to hedge against future volatility in exchange rates between the U.S. dollar and the Euro. We believe our exposure to changes in foreign currency is not material given our hedging policy. For additional information regarding our foreign currency exchange risk refer to Note 13, Financing Arrangements, of the consolidated financial statements included in this Annual Report.

### **Interest Rate Risk**

Loans under our credit facility bear interest at variable rates which reset every 30 to 180 days depending on the rate and period selected by the Company. These loans are subject to interest rate risk as interest rates will be adjusted at each rollover date to the extent such amounts are not repaid. As of December 31, 2019, the annual rates on the revolving loans were 6.0%. The Company entered into a hedging agreement to mitigate the inherent rate risk associated with our outstanding variable rate debt. We believe our exposure to changes in interest rates is not material given our hedging policy. Refer to Note 13, Financing Arrangements, of the consolidated financial statements included in this Annual Report.

## **Item 8. Financial Statements and Supplementary Data**

Our consolidated financial statements and the related notes thereto are listed in Item 15(a)(1) on the Index to Consolidated Financial Statements.

## **Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure**

None.

## **Item 9A. Controls and Procedures**

### **Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") (our principal executive officer and principal financial officer, respectively), has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934) as of the end of the period covered by this Annual Report on Form 10-K. The Company's disclosure controls and procedures are designed to provide reasonable assurance that information we disclose in reports that we file or submit under the Securities Exchange Act of 1934 is accumulated and communicated to management, including our principal executive and financial officers, to allow timely decisions regarding disclosure and that such information is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our CEO and CFO concluded that, as of December 31, 2019, the Company's disclosure controls and procedures were not effective because of the material weaknesses in our internal control over financial reporting described below.

### **Management's Report on Internal Control over Financial Reporting**

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined by Rules 13a-15(f) and 15d-15(f) under the Exchange Act). The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

The Company's management assessed the effectiveness of internal control over financial reporting as of December 31, 2019, based upon the framework presented in "Internal Control-Integrated Framework" (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, management concluded that the Company's internal control over financial reporting was not effective as of December 31, 2019, due to the material weaknesses discussed below.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis.

We did not maintain a sufficient complement of corporate personnel with appropriate levels of accounting and controls knowledge and experience commensurate with our financial reporting requirements to appropriately analyze, record and disclose accounting matters completely and accurately. This material weakness contributed to the following additional material weaknesses detailed below.

- We did not design and maintain effective controls to analyze, account for and review non-routine transactions at the corporate level, including accounting for the financial statement effects of business dispositions, adverse purchase commitment liabilities, restricted cash balance sheet classification and other non-recurring transactions.
- We did not design and maintain effective controls over the preparation, review and approval of certain account reconciliations. Specifically, we did not maintain effective controls over the completeness and review of supporting schedules and accuracy of underlying data supporting account reconciliations prepared at the corporate level and certain of our shared service locations.

These material weaknesses resulted in audit adjustments to the Company's consolidated financial statements in the areas of income taxes, cash and cash equivalents (including restricted cash), adverse purchase commitment liabilities and other liabilities, and special charges related to non-recurring transactions as of and for the year ended December 31, 2019. Additionally, these material weaknesses could result in misstatements of the annual or interim consolidated financial statements that would result in a material misstatement that would not be prevented or detected.

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

### Remediation Plan for Material Weakness in Internal Control over Financial Reporting

We have been actively addressing the identified material weaknesses. Actions have been taken to strengthen controls, and further actions are planned including:

- Hire additional full-time corporate accounting resources with appropriate levels of experience
- Continue to allocate additional resources to the Corporate accounting function, which may include the use of independent consultants with sufficient expertise to assist in the preparation and review of certain non-recurring transactions and timely review of the account reconciliations
- Continue training on a regular basis related to internal control over financial reporting for our finance and accounting personnel

We anticipate that the actions described above and resulting improvements in controls will strengthen the Company's internal control over financial reporting and will address the related material weaknesses.

### **Changes in Internal Control over Financial Reporting**

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### **Item 9B. Other Information**

None.

## Part III

### Item 10. Directors, Executive Officers and Corporate Governance

The information required under this item is incorporated by reference to the Company's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the Company's fiscal year ended December 31, 2019.

#### Code of Ethics

The Company has implemented and regularly monitors compliance with a comprehensive Code of Conduct & Business Ethics (the "Code of Conduct"), which applies uniformly to all directors, executive officers, and employees. Among other things, the Code of Conduct addresses conflicts of interest, confidentially, fair dealing, protection and proper use of Company assets, compliance with applicable law (including insider trading and anti-bribery laws), and reporting of illegal or unethical behavior. The Code of Conduct is available on the Company's website at [www.CIRCOR.com](http://www.CIRCOR.com) under the "Investors" sub link and hardcopy will be provided by the Company to any stockholder who requests it by writing to the Company's Secretary at the Company's headquarters. In addition, we intend to post on our website all disclosures that are required by SEC regulations or NYSE listing standards with respect to amendments to, or waivers from, any provision of the Code of Conduct.

### Item 11. Executive Compensation

The information required under this item is incorporated by reference to the Company's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the Company's fiscal year ended December 31, 2019.

### Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Except for the information required by Section 201(d) of Regulation S-K which is set forth below, the information required under this item is incorporated by reference to the Company's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the Company's fiscal year ended December 31, 2019.

#### EQUITY COMPENSATION PLAN INFORMATION

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights		Weighted-average exercise price of outstanding options, warrants and rights		Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(1)	(b)	(3)	(c)
Equity compensation plans approved by security holders	944,061	(1)	\$35.10	(3)	952,825
Equity compensation plans not approved by security holders	150,000	(2)	\$8.67	(3)	N/A
Total	1,094,061		\$26.33		952,825

- (1) Reflects 28,348 stock options and 1,050 restricted stock units granted under the Company's Amended and Restated 1999 Stock Option and Incentive Plan, 534,152 stock options and 333,336 restricted stock units granted under the Company's 2014 Stock Option and Incentive Plan, and 47,175 restricted stock units granted under the Company's 2019 Stock Option and Incentive Plan.
- (2) Reflects stock options issued as an inducement equity award to our President and CEO on April 9, 2013. This award was granted pursuant to the inducement award exemption under Section 303A.08 of the NYSE Listed Company Manual. Details of this grant, including vesting terms, are set forth in Note 14, Share-Based Compensation, of the consolidated financial statements included in this Annual Report.
- (3) The weighted-average exercise price does not take into account the shares issuable upon vesting of outstanding restricted stock units, which have no exercise price.



## Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required under this item is incorporated by reference to the Company's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the Company's fiscal year ended December 31, 2019.

## Item 14. Principal Accounting Fees and Services

The information required under this item is incorporated by reference to the Company's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the Company's fiscal year ended December 31, 2019.

## Part IV

## Item 15. Exhibits, Financial Statement Schedules

### (a)(1) Financial Statements

Topic	Page Number
<a href="#">Report of Independent Registered Public Accounting Firm</a>	<a href="#">45</a>
<a href="#">Consolidated Balance Sheets</a>	<a href="#">49</a>
<a href="#">Consolidated Statements of (Loss) Income</a>	<a href="#">50</a>
<a href="#">Consolidated Statements of Comprehensive (Loss) Income</a>	<a href="#">51</a>
<a href="#">Consolidated Statements of Cash Flows</a>	<a href="#">52</a>
<a href="#">Consolidated Statements of Shareholders' Equity</a>	<a href="#">53</a>
<a href="#">Notes to Consolidated Financial Statements</a>	<a href="#">54</a>

Report of PricewaterhouseCoopers LLP dated March 30, 2020 on the Company's financial statements filed as a part hereof for the fiscal year ended December 31, 2019 and on the Company's internal control over financial reporting as of December 31, 2019 is included in this Annual Report on Form 10-K. The independent registered public accounting firm's consent with respect to this report appears in Exhibit 23.1 of this Annual Report on Form 10-K.

### (a)(2) Financial Statement Schedules

	Page
<a href="#">Schedule II - Valuation and Qualifying Accounts for the years ended December 31, 2019, 2018 and 2017</a>	<a href="#">101</a>

Other than our Allowance for Doubtful Accounts Rollforward included in Schedule II Valuation and Qualifying Accounts, all other schedules are omitted because they are not applicable or not required, or because the required information is included either in the consolidated financial statements or in the notes thereto.

### (a)(3) Exhibits

Unless otherwise indicated, references to exhibits in the table below being incorporated by reference are made in each case with respect to filings of the Company, SEC File No. 001-14962.

Exhibit No.	Description and Location
<a href="#">2.1</a>	Share Purchase Agreement, dated April 15, 2015, between the Company and affiliates and Schroedahl-ARAPP Spezialarmaturen GmbH & Co. KG and affiliates, incorporated herein by reference to Exhibit 2.1 to the Company's Form 8-K filed with the SEC on April 15, 2015

- [2.2](#) Agreement and Plan of Merger dated October 12, 2016 by and among the Company, Downstream Holding, LLC, Downstream Acquisition LLC, and Sun Downstream, LP., incorporated herein by reference to Exhibit 2.1 to the Company's Form 8-K filed with the SEC on October 14, 2016
- [2.3](#) Purchase Agreement, dated as of September 24, 2017, by and between Colfax Corporation and the Company, incorporated herein by reference to Exhibit 2.1 to the Company's Form 8-K filed with the SEC on September 25, 2017
- [2.4](#) Quota Purchase Agreement, dated as of July 13, 2019, as amended by Amendment No. 1 to the Quota Purchase Agreement, dated as of July, 26, 2019, between CEP Holdings Sarl and P&P Flow Control AG, incorporated herein by reference to Exhibit 2.1 of the Company's Form 8-K, filed with the SEC on August 1, 2019
- [2.5](#) Asset Purchase Agreement, dated as of August 30, 2019, by and among Spence Engineering Company, Inc., Leslie Controls, Inc., Emerson Process Management Regulator Technologies, Inc. and Company (for certain enumerated provisions), incorporated herein by reference to Exhibit 2.1 of the Company's Form 8-K, filed with the SEC on September 6, 2019
- [2.6](#) Amended and Restated Securities Purchase Agreement, dated as of January 31, 2020, by and among CIRCOR Dovianus Holdings B.V., CIRCOR Aerospace, Inc., Company and Crane Co., incorporated herein by reference to Exhibit 2.1 of the Company's Form 8-K, filed with the SEC on February 5, 2020
- 3 Articles of Incorporation and By-Laws:
- [3.1](#) Amended and Restated Certificate of Incorporation of the Company, incorporated herein by reference to Exhibit 3.1 to the Company's Form 10-Q, filed with the SEC on October 29, 2009
- [3.2](#) Amended and Restated By-Laws, as amended, of the Company, incorporated herein by reference to Exhibit 3.1 to the Company's Form 10-Q, filed with the SEC on October 31, 2013
- 4 Instruments defining the rights of security holders, including indentures
- [4.1](#) Description of Securities Registered under Section 12 of the Exchange Act (to link)
- 10.1 Material Contracts:
- [10.2](#) Credit Agreement, dated as of December 11, 2017, by and among the Company, as borrower, certain subsidiaries of the Company, as guarantors, the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as term loan administrative agent and collateral agent, SunTrust Bank, as revolver administrative agent, swing line lender and a letter of credit issuer, Deutsche Bank Securities Inc. and SunTrust Robinson Humphrey, Inc., as joint-lead arrangers and joint-bookrunners, and Citizens Bank, N.A. and HSBC Securities (USA) Inc. as co-managers incorporated herein by reference to Exhibit 10.2 to the Company's Form 8-K, filed with the SEC on December 12, 2017
- [10.3§](#) CIRCOR International, Inc. Amended and Restated 1999 Stock Option and Incentive Plan (as amended, the "1999 Stock Option and Incentive Plan"), incorporated herein by reference to Exhibit 4.4 to the Company's Form S-8, File No. 333-125237, filed with the SEC on May 25, 2005
- [10.4§](#) First Amendment to the 1999 Stock Option and Incentive Plan, dated as of December 1, 2005, incorporated herein by reference to Exhibit 10.1 to the Company's Form 8-K, filed with the SEC on December 7, 2005
- [10.5§](#) Second Amendment to the 1999 Stock Option and Incentive Plan, dated as of February 12, 2014, incorporated herein by reference to Exhibit 10.6 to the Company's Form 10-K, filed with the SEC on March, 1 2018
- [10.6§](#) Form of Non-Qualified Stock Option Agreement for Employees (Three Year Cliff Vesting) under the 1999 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.1 to the Company's Form 10-Q, filed with the SEC on May 10, 2010
- [10.7§](#) CIRCOR International, Inc. Amended and Restated Management Stock Purchase Plan dated as of January 1, 2017, incorporated herein by reference to Exhibit 10.8 to the Company's Form 10-K, filed with the SEC on March1, 2018
- [10.8§](#) Form of Indemnification Agreement entered into by the Company and its directors and certain of its officers incorporated herein by reference to Exhibit 10.12 to the Company's Form 10-K, filed with the SEC on March 12, 2003
- [10.9§](#) Executive Change of Control Agreement between CIRCOR, Inc. and Arjun Sharma, dated September 1, 2009, incorporated herein by reference to Exhibit 10.2 to the Company's Form 10-Q, filed with the SEC on October 29, 2009
- [10.10§](#) Amendment to Executive Change of Control Agreement between CIRCOR, Inc. and Arjun Sharma, dated November 4, 2010, incorporated by reference to Exhibit 10.8 to the Company's Form 8-K, filed with the SEC on November 5, 2010
- [10.11§](#) Restricted Stock Unit Agreement, dated as of April 9, 2013, between the Company and Scott A Buckhout incorporated herein by reference to Exhibit 10.1 to the Company's Form 8-K, filed with the SEC on April 15, 2013
- [10.12§](#) Performance-Based Restricted Stock Unit Agreement, dated as of April 9, 2013, between the Company and Scott A Buckhout, incorporated herein by reference to Exhibit 10.2 to the Company's Form 8-K, filed with the SEC on April 15, 2013

- [10.13§](#) Stock Option Inducement Award Agreement, dated as of April 9, 2013, between the Company and Scott A Buckhout, incorporated herein by reference to Exhibit 10.3 to the Company's Form 8-K, filed with the SEC on April 15, 2013
- [10.14§](#) Severance Agreement, dated as of April 9, 2013, between the Company and Scott A Buckhout, incorporated herein by reference to Exhibit 10.4 to the Company's Form 8-K, filed with the SEC on April 15, 2013
- [10.15§](#) Amended Performance-Based Restricted Stock Unit Agreement, dated as of April 9, 2013, between the Company and Scott A. Buckhout, incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q, filed with the SEC on April 28, 2015
- [10.16§](#) Executive Change of Control Agreement, dated as of April 9, 2013, between the Company and Scott A Buckhout, incorporated herein by reference to Exhibit 10.5 to the Company's Form 8-K, filed with the SEC on April 15, 2013
- [10.17§](#) Performance-Based Stock Option Award Agreement, dated as of March 5, 2014, between the Company and Scott A. Buckhout, incorporated herein by reference to Exhibit 10.1 to the Company's Form 8-K, filed with the SEC on March 11, 2014
- [10.18§](#) CIRCOR International, Inc. 2014 Stock Option and Incentive Plan 201 (the "2014 Stock Option and Incentive Plan") incorporated herein by reference to Exhibit A to the Company's Definitive Proxy Statement, filed with the SEC on March 21
- [10.19§](#) First Amendment to 2014 Stock Option and Incentive Plan, dated February 12, 2014, incorporated herein by reference to Exhibit 10.36 to the Company's Form 10-K, filed with the SEC on February 18, 2015
- [10.20§](#) Executive Change of Control Agreement, dated as of June 10, 2015, between the Company and Andrew Farnsworth, incorporated herein by reference to Exhibit 10.1 to the Company's Form 10-Q filed with the SEC on July 29, 2015
- [10.21§](#) Executive Change of Control Agreement, dated as of January 8, 2016, between the Company and David Mullen, incorporated herein by reference to Exhibit 10.29 the Company's Form 10-K filed with the SEC on February 23, 2016
- [10.22§](#) Form of Performance-Based Restricted Stock Unit Agreement For Employees and Directors under the 1999 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.29 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.23§](#) Form of Restricted Stock Unit Agreement For Employees and Directors under the 1999 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.30 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.24§](#) Form of Restricted Stock Unit Agreement For Directors under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.31 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.25§](#) Form of Performance-Based Restricted Stock Unit Agreement For Employees and Directors under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.32 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.26§](#) Form of Management Stock Purchase Plan Restricted Stock Unit Agreement For Employees and Directors under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.33 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.27§](#) Form of Non-Qualified Stock Option Agreement for Employees under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.34 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.28§](#) Form of Restricted Stock Unit Agreement For Employees under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.35 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.29§](#) Executive Change of Control Agreement, dated as of 2016, between the Company and Sumit Mehrotra, incorporated herein by reference to Exhibit 10.37 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.30§](#) Severance Agreement, dated as of December 9, 2016, between the Company and Sumit Mehrotra, incorporated herein by reference to Exhibit 10.39 of the Company's Form 10-K, filed with the SEC on February 21, 2017
- [10.31§](#) Stockholders Agreement, dated December 11, 2017, between the Company and Colfax Corporation, incorporated herein by reference to Exhibit 10.1 to the Company's Form 8-K, filed with the SEC on December 12, 2017
- [10.32§](#) Severance Agreement, dated as of April 21, 2017, between the Company and Arjun Sharma, incorporated herein by reference to Exhibit 10.1 to the Company's Form 10-Q, filed with the SEC on April 28, 2017
- [10.33§](#) Executive Change of Control Agreement between CIRCOR, International Inc. and Chadi Chahine, dated January 7, 2019, incorporated herein by reference to Exhibit 10.39 to the Company's Form 10-K, filed with the SEC on March 1, 2019.

<a href="#"><u>10.34§</u></a>	Severance Agreement, dated January 7, 2019, between the Company and Chadi Chahine, incorporated herein by reference to Exhibit 10. to the Company's Form 10-K, filed with the SEC on March 1, 2019.
<a href="#"><u>10.35§</u></a>	Executive Change of Control Agreement between CIRCOR, Inc. and Lane Walker, dated October 10, 2018, incorporated herein by reference to Exhibit 10. to the Company's Form 10-K, filed with the SEC on March 1, 2019.
<a href="#"><u>10.36§</u></a>	Severance Agreement, dated October 10, 2018, between the Company and Lane Walker, incorporated herein by reference to Exhibit 10. to the Company's Form 10-K, filed with the SEC on March 1, 2019.
<a href="#"><u>10.37§</u></a>	Form of Performance-Based Restricted Stock Unit Agreement for Employees under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.1 of the Company's Form 10-Q, filed with the SEC on May 14, 2019
<a href="#"><u>10.38§</u></a>	Form of Management Stock Purchase Plan Restricted Stock Unit Agreement for Employees and Directors under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.2 of the Company's Form 10-Q, filed with the SEC on May 14, 2019
<a href="#"><u>10.39§</u></a>	Form of Non-Qualified Stock Option Agreement for Employees under the 2014 Stock Option And Incentive Plan, incorporated herein by reference to Exhibit 10.3 of the Company's Form 10-Q, filed with the SEC on May 14, 2019
<a href="#"><u>10.40§</u></a>	Form of Restricted Stock Unit Agreement for Employees under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.4 of the Company's Form 10-Q, filed with the SEC on May 14, 2019
<a href="#"><u>10.41§</u></a>	Form of Restricted Stock Unit Agreement for Directors under the 2014 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.5 of the Company's Form 10-Q, filed with the SEC on May 14, 2019
<a href="#"><u>10.42§</u></a>	2019 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 99.1 of the Company's Form 8-K, filed with the SEC on May 14, 2019
<a href="#"><u>10.43§</u></a>	Form of Performance-Based Restricted Stock Unit Agreement for Employees under the 2019 Stock Option and Incentive Plan, incorporated herein by reference to Exhibit 10.1 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.44§</u></a>	Amendment to Executive Change of Control Agreement for Chadi Chahine, incorporated herein by reference to Exhibit 10.2 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.45§</u></a>	Amendment to Executive Change of Control Agreement for Lane Walker, incorporated herein by reference to Exhibit 10.3 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.46§</u></a>	Amendment to Executive Change of Control Agreement for Tony Najjar, incorporated herein by reference to Exhibit 10.4 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.47§</u></a>	Third Amendment to Executive Change of Control Agreement for Arjun Sharma, incorporated herein by reference to Exhibit 10.5 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.48§</u></a>	Second Amendment to Executive Change of Control Agreement for Andrew Farnsworth, incorporated herein by reference to Exhibit 10.6 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.49§</u></a>	Second Amendment to Executive Change of Control Agreement for David Mullen, incorporated herein by reference to Exhibit 10.7 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.50§</u></a>	Second Amendment to Executive Change of Control Agreement for Scott Buckhout, incorporated herein by reference to Exhibit 10.8 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.51§</u></a>	Amendment to Executive Change of Control Agreement for Sumit Mehrotra, incorporated herein by reference to Exhibit 10.9 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.52§</u></a>	Second Amendment to Executive Change of Control Agreement for Sumit Mehrotra, incorporated herein by reference to Exhibit 10.10 of the Company's Form 10-Q, filed with the SEC on August 1, 2019
<a href="#"><u>10.53§</u></a>	Guaranty dated August 30, 2019 by Company to Emerson Process Management Regulator Technologies, Inc., incorporated herein by reference to Exhibit 10.1 of the Company's Form 8-K, filed with the SEC on September 6, 2019
<a href="#"><u>10.54§</u></a>	First Amendment to the Amended and Restated Management Stock Purchase Plan, incorporated herein by reference to Exhibit 10.2 of the Company's Form 10-Q, filed with the SEC on November 13, 2019
<a href="#"><u>10.55§**</u></a>	Lane Walker Transaction Bonus Letter (to link)
<a href="#"><u>10.56§**</u></a>	Amendment No 2. to the Credit Agreement
<a href="#"><u>21**</u></a>	Schedule of Subsidiaries of CIRCOR International, Inc.
<a href="#"><u>23.1**</u></a>	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm
<a href="#"><u>31.1**</u></a>	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
<a href="#"><u>31.2**</u></a>	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

- [32.1\\*\\*\\*](#) Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 101 The following financial statements from CIRCOR International, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on March 30, 2020, formatted in XBRL (eXtensible Business Reporting Language), as follows:
- (i) Consolidated Balance Sheets as of December 31, 2019 and 2018
  - (ii) Consolidated Statements of Income for the years ended December 31, 2019, 2018 and 2017
  - (iii) Consolidated Statements of Comprehensive (Loss) Income for the years ended December 31, 2019, 2018 and 2017
  - (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017
  - (v) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2019, 2018 and 2017
  - (vi) Notes to the Consolidated Financial Statements

\* The Company hereby agrees to provide the Commission, upon request, copies of any omitted exhibits or schedules to this exhibit required by Item 601(b)(2) of Regulation S-K.  
\*\* Filed with this report.  
\*\*\* Furnished with this report.  
§ Indicates management contract or compensatory plan or arrangement.

## **Item 16. Form 10-K Summary**

Not applicable.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

CIRCOR INTERNATIONAL, INC.

By: /s/ Scott A. Buckhout  
Scott A. Buckhout  
President and Chief Executive Officer

Date: March 30, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ Scott A. Buckhout	President and Chief Executive Officer (Principal Executive Officer)	March 30, 2020
Scott A. Buckhout		
/s/ Gregory C. Bowen	Senior Vice President and Corporate Controller (Principal Financial and Accounting Officer)	March 30, 2020
Gregory C. Bowen		
/s/ David F. Dietz	Chairman of the Board of Directors	March 30, 2020
David F. Dietz		
/s/ Tina M. Donikowski	Director	March 30, 2020
Tina M. Donikowski		
/s/ Helmuth Ludwig	Director	March 30, 2020
Helmuth Ludwig		
/s/ Samuel Chapin	Director	March 30, 2020
Samuel Chapin		
/s/ John A. O'Donnell	Director	March 30, 2020
John A. O'Donnell		
/s/ Peter M. Wilver	Director	March 30, 2020
Peter M. Wilver		
/s/ Jill D. Smith	Director	March 30, 2020
Jill D. Smith		

## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of CIRCOR International, Inc.

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets of CIRCOR International, Inc. and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of (loss) income, comprehensive (loss) income, shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO because material weaknesses in internal control over financial reporting existed as of that date related to (i) not maintaining a sufficient complement of corporate personnel with appropriate levels of accounting and controls knowledge and experience commensurate with the Company’s financial reporting requirements, (ii) not designing and maintaining effective controls to analyze, account for and review non-routine transactions at the corporate level, and (iii) not designing and maintaining effective controls over the preparation, review and approval of account reconciliations prepared at the corporate level and certain of the Company’s shared service locations.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses referred to above are described in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. We considered these material weaknesses in determining the nature, timing, and extent of audit tests applied in our audit of the 2019 consolidated financial statements, and our opinion regarding the effectiveness of the Company’s internal control over financial reporting does not affect our opinion on those consolidated financial statements.

### ***Changes in Accounting Principles***

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and the manner in which it accounts for revenue from contracts with customers in 2018.

### ***Basis for Opinions***

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in management’s report referred to above. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal

control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***Subsequent Event***

As discussed in Note 23 to the consolidated financial statements, as a result of the COVID-19 outbreak, the Company has experienced a significant decline in its market capitalization to below its consolidated book value. As a result, management has concluded that there will be a goodwill and an intangible asset impairment triggering event in the first quarter of 2020, which will result in management performing an impairment evaluation of its goodwill and intangible asset balances.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### ***Critical Audit Matters***

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

### ***Goodwill Impairment Assessment***

As described in Notes 2 and 10 to the consolidated financial statements, the Company's consolidated goodwill balance was \$272 million as of December 31, 2019. Management performs an impairment assessment at the reporting unit level on an annual basis as of the Company's October month end or more frequently if circumstances warrant. The annual impairment assessment requires a comparison of the fair value of each reporting unit to the respective carrying value. If the carrying value of a reporting unit is greater than the fair value, an impairment loss will be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to the reporting unit. Goodwill allocated to reporting units as of December 31, 2019 excluded amounts allocated to disposed businesses and the Instrumentation & Sampling disposal group which was held for sale. With the assistance of an independent third-party appraisal firm, management estimates the fair value of the reporting units using an income approach based on the present value of future cash flows. The key assumptions utilized in the discounted cash flow model include estimates of the rate of revenue growth, including the rate of growth used in the terminal year value, as well as the discount rate based on a weighted average cost of capital.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment is a critical audit matter are there was significant judgment by management when developing the fair value measurement of the reporting units and, as described in the "Opinions on the Financial Statements and Internal Control over Financial Reporting" section, a material weakness was identified as of December 31, 2019 related to an insufficient complement of corporate personnel with appropriate levels of accounting and controls knowledge and experience commensurate with the Company's financial reporting requirements. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence relating to management's cash flow projections and significant assumptions, including the rate of revenue growth, including the rate of growth used in the terminal year value, as well as the discount rate



based on a weighted average cost of capital. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others, testing management's process for developing the fair value measurement. This included evaluating the appropriateness of the discounted cash flow model, testing the completeness, accuracy, and relevance of underlying data used in the model, and evaluating the reasonableness of the significant assumptions used by management, including the rate of revenue growth, including the rate of growth used in the terminal year value, and the discount rate based on a weighted average cost of capital. Evaluating the reasonableness of management's assumptions related to the rate of revenue growth, including the rate of growth used in the terminal year value, and the discount rate based on a weighted average cost of capital involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting units, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the Company's discounted cash flow model and certain significant assumptions, including the discount rate.

#### *Fair Value of the Distributed Valves Disposal Group*

As described in Notes 2 and 3 to the consolidated financial statements, the Company classified the Distributed Valves business as a disposal group held for sale in the third quarter of 2019. The Company initially measured the disposal group held for sale at the lower of the carrying value or the fair value less any costs to sell. The loss resulting from this measurement was recognized in the period in which the held for sale criteria were met. The Company assessed the fair value of the disposal group less any costs to sell each reporting period until the date of sale. During the year ended December 31, 2019, the Company recognized a valuation allowance of \$39.8 million to adjust the carrying value of the disposal group to its fair value less expected costs to sell value of \$2.3 million. Management calculated the fair value of the disposal group held for sale using an income approach based on the present value of projected future cash flows. This approach incorporates several key assumptions which include the rate of revenue growth, including the rate of growth used in the terminal year value, the projected operating margin, as well as the discount rate based on a weighted average cost of capital.

The principal considerations for our determination that performing procedures relating to the fair value of the Distributed Valves disposal group is a critical audit matter are there was significant judgment by management when developing the fair value measurement of the disposal group and, as described in the "Opinions on the Financial Statements and Internal Control over Financial Reporting" section, a material weakness was identified as of December 31, 2019 related to an insufficient complement of corporate personnel with appropriate levels of accounting and controls knowledge and experience commensurate with the Company's financial reporting requirements. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence relating to management's cash flow projections and significant assumptions, including the rate of revenue growth, including the rate of growth used in the terminal year value, the projected operating margin, as well as the discount rate based on a weighted average cost of capital. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures including testing the effectiveness of controls relating to management's fair value assessment of the Distributed Valves disposal group, including controls over the development of assumptions relating to the cash flow projections. These procedures also included, among others, testing management's process for developing the fair value measurement of the disposal group. This included evaluating the appropriateness of the discounted cash flow model, testing the completeness, accuracy, and relevance of underlying data used in the model, and evaluating the reasonableness of the significant assumptions used by management, including the rate of revenue growth, including the rate of growth used in the terminal year value, the projected operating margin, and the discount rate based on a weighted average cost of capital. Evaluating the reasonableness of management's assumptions related to the rate of revenue growth, including the rate of growth used in the terminal year value, and the projected operating margin involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the disposal group, (ii) the consistency with external market and industry data, (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the Company's discounted cash flow model and certain significant assumptions, including the discount rate.

/s/ PricewaterhouseCoopers LLP  
Boston, Massachusetts  
March 30, 2020

We have served as the Company's auditor since 2015.

**CIRCOR INTERNATIONAL, INC.**  
**Consolidated Balance Sheets**  
(in thousands, except share and per share data)

	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 84,531	\$ 68,517
Trade accounts receivable, less allowance for doubtful accounts of \$3,086 and \$2,270, respectively	125,422	167,181
Inventories	137,309	143,682
Prepaid expenses and other current assets	66,664	71,428
Assets held for sale	161,193	197,238
Total Current Assets	575,119	648,046
<b>PROPERTY, PLANT AND EQUIPMENT, NET</b>	172,179	189,672
<b>OTHER ASSETS:</b>		
Goodwill	271,893	450,605
Intangibles, net	385,542	440,281
Deferred income taxes	30,852	19,906
Assets held for sale	—	30,374
Other assets	35,360	12,728
<b>TOTAL ASSETS</b>	<b>\$ 1,470,945</b>	<b>\$ 1,791,612</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 79,399	\$ 94,715
Accrued expenses and other current liabilities	94,169	92,496
Accrued compensation and benefits	19,518	30,703
Liabilities held for sale	43,289	58,298
Notes payable and current portion of long-term debt	—	7,850
Total Current Liabilities	236,375	284,062
<b>LONG-TERM DEBT</b>	636,297	778,187
<b>DEFERRED INCOME TAXES</b>	21,425	33,607
<b>PENSION LIABILITY, NET</b>	146,801	150,623
<b>LIABILITIES HELD FOR SALE</b>	—	861
<b>OTHER NON-CURRENT LIABILITIES</b>	38,636	15,279
<b>COMMITMENTS AND CONTINGENCIES (NOTE 17)</b>		
<b>SHAREHOLDERS' EQUITY:</b>		
Preferred stock, \$0.01 par value; 1,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.01 par value; 29,000,000 shares authorized; 19,912,362 and 19,845,205 shares issued at December 31, 2019 and 2018, respectively	213	212
Additional paid-in capital	446,657	440,890
Retained earnings	99,280	232,102
Common treasury stock, at cost (1,372,488 shares at December 31, 2019 and 2018)	(74,472)	(74,472)
Accumulated other comprehensive loss	(80,267)	(69,739)
Total Shareholders' Equity	391,411	528,993
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>\$ 1,470,945</b>	<b>\$ 1,791,612</b>

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

CIRCOR INTERNATIONAL, INC.  
Consolidated Statements of (Loss) Income  
(in thousands, except per share data)

	Year Ended December 31,		
	2019	2018	2017
Net revenues	\$ 964,313	\$ 1,013,470	\$ 505,492
Cost of revenues	655,504	688,267	332,818
Gross Profit	308,809	325,203	172,674
Selling, general and administrative expenses	248,256	284,641	146,478
Special and restructuring charges, net	22,872	18,909	9,889
Operating income	37,681	21,653	16,307
Other expense (income):			
Interest expense, net	48,609	52,975	10,841
Other (income) expense, net	(836)	(7,426)	1,826
Total other expense, net	47,773	45,549	12,667
(Loss) income from continuing operations before income taxes	(10,092)	(23,896)	3,640
Provision for (Benefit from) income taxes	14,676	9,451	(7,211)
(Loss) Income from continuing operations, net of tax	(24,768)	(33,347)	10,851
(Loss) Income from discontinued operations, net of tax	(109,167)	(6,037)	938
Net (Loss) Income	\$ (133,935)	\$ (39,384)	\$ 11,789
Basic (Loss) Income per common share:			
Basic from continuing operations	\$ (1.24)	\$ (1.68)	\$ 0.65
Basic from discontinued operations	\$ (5.48)	\$ (0.30)	\$ 0.06
Net (Loss) Income	\$ (6.73)	\$ (1.99)	\$ 0.71
Diluted (Loss) Income per common share:			
Diluted from continuing operations	\$ (1.24)	\$ (1.68)	\$ 0.64
Diluted from discontinued operations	\$ (5.48)	\$ (0.30)	\$ 0.06
Net (Loss) Income	\$ (6.73)	\$ (1.99)	\$ 0.70
Weighted average common shares outstanding:			
Basic	19,903	19,834	16,674
Diluted	19,903	19,834	16,849

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

CIRCOR INTERNATIONAL, INC.  
Consolidated Statements of Comprehensive (Loss) Income  
(in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net (loss) income	\$ (133,935)	\$ (39,384)	\$ 11,789
Other comprehensive (loss) income:			
Foreign currency translation adjustments	(4,740)	(20,523)	34,119
Interest rate swap adjustments (1)	(5,390)	(1,516)	—
Other net changes in post-retirement liabilities and assets - recognized actuarial (loss) gains (2)	(398)	(11,087)	4,877
Net periodic pension costs amortization (3)	—	117	535
Other comprehensive (loss) income	(10,528)	(33,009)	39,531
COMPREHENSIVE (LOSS) INCOME	\$ (144,463)	\$ (72,393)	\$ 51,320

- (1) Net of an income tax effect of \$1.6 million and \$(0.5) million for the years ended December 31, 2019 and December 31, 2018, respectively.  
(2) Net of an income tax effect of \$1.9 million, \$3.3 million, and \$1.8 million for the years ended December 31, 2019, 2018 and 2017, respectively.  
(3) Net of an income tax effect of \$0.0 million, \$0.0 million, and \$0.5 million for the years ended December 31, 2019, 2018 and 2017, respectively.

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

CIRCOR INTERNATIONAL, INC.  
Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2019	2018	2017
<b>OPERATING ACTIVITIES</b>			
Net (loss) income	\$ (133,935)	\$ (39,384)	\$ 11,789
(Loss) income from discontinued operations	(109,167)	(6,037)	938
(Loss) income from continuing operations	(24,768)	(33,347)	10,851
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation	22,045	26,183	12,413
Amortization	47,591	49,129	14,621
Provision for bad debt expense	617	(261)	777
Loss on write down of inventory and amortization of fair value step-up	366	7,675	7,175
Compensation expense of share-based plans	5,418	4,965	3,807
Debt extinguishment	—	—	1,810
Change in fair value of contingent consideration	—	—	(12,200)
Amortization of debt issuance costs	4,622	3,937	759
Deferred income tax benefit	(3,440)	(2,367)	(11,792)
(Gain) loss on disposal of property, plant and equipment	(1,793)	1,380	349
Loss on sale of businesses	3,615	1,882	5,300
Changes in operating assets and liabilities, net of effects of acquisitions and divestitures:			
Trade accounts receivable	24,339	(12,229)	(17,232)
Inventories	(9,557)	6,620	15,647
Prepaid expenses and other assets	7,360	(26,770)	(6,664)
Accounts payable, accrued expenses and other liabilities	(34,168)	30,458	(16,085)
Net cash provided by continuing operations	42,247	57,255	9,536
Net cash (used in) provided by discontinued operations	(26,334)	(3,261)	101
Net cash provided by operating activities	15,913	53,994	9,637
<b>INVESTING ACTIVITIES</b>			
Purchases of property, plant and equipment	(13,855)	(20,114)	(12,814)
Proceeds from the sale of property, plant and equipment	6,172	156	785
Proceeds from collection of beneficial interest	861	—	—
Proceeds from divestitures	162,591	2,753	—
Business acquisitions, net of cash acquired	—	3,727	(488,517)
Net cash provided by (used in) continuing investing activities	155,769	(13,478)	(500,546)
Net cash used in discontinued investing activities	(2,733)	(3,399)	(1,578)
Net cash provided by (used in) investing activities	153,036	(16,877)	(502,124)
<b>FINANCING ACTIVITIES</b>			
Proceeds from long-term debt	281,600	248,300	1,090,883
Payments of short-term and long-term debt	(434,797)	(260,146)	(523,183)
Debt issuance costs	—	—	(30,366)
Dividends paid	—	—	(2,506)
Proceeds from the exercise of stock options	253	690	740
Return of cash to seller	—	(62,917)	—
Net cash (used in) provided by continuing financing activities	(152,944)	(74,073)	535,568
Net cash (used in) provided by financing activities	(152,944)	(74,073)	535,568
Effect of exchange rate changes on cash and cash equivalents	197	(5,812)	8,996
<b>INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	16,202	(42,768)	52,077
Cash and cash equivalents at beginning of year	69,525	112,293	58,279
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<u>\$ 85,727</u>	<u>\$ 69,525</u>	<u>\$ 110,356</u>
Cash paid during the year for:			
Income taxes	\$ 16,711	\$ 633	\$ 9,984
Interest	\$ 47,544	\$ 50,326	\$ 6,778
Non-cash supplemental information:			
Share issuance for business acquisition	\$ —	\$ —	\$ 143,767
Accrued purchase price	\$ —	\$ —	\$ 4,824
Payable to seller related to cash balances	\$ —	\$ —	\$ 65,314
Change in fair value for shares issued in acquisition	\$ —	\$ (3,783)	\$ —
Accrued purchase price settled	\$ —	\$ (2,299)	\$ —



**CIRCOR INTERNATIONAL, INC.**  
**Consolidated Statements of Shareholders' Equity**  
(in thousands)

	<b>Common Stock</b>		<b>Additional</b>	<b>Retained</b>	<b>Accumulated</b>	<b>Treasury</b>	<b>Total</b>
	<b>Shares</b>	<b>Amount</b>	<b>Paid-in</b>	<b>Earnings</b>	<b>Other</b>	<b>Stock</b>	<b>Shareholders'</b>
			<b>Capital</b>		<b>Comprehensive</b>		<b>Equity</b>
					<b>(Loss) Income</b>		
BALANCE AT DECEMBER 31, 2016	16,445	\$ 178	\$ 289,422	\$ 265,543	\$ (76,261)	\$ (74,472)	\$ 404,410
Net income	—	—	—	11,789	—	—	11,789
Cumulative effect adjustment related to the adoption of share-based compensation standard (ASU 2016-09)	—	—	755	(582)	—	—	173
Other comprehensive loss, net of tax	—	—	—	—	39,531	—	39,531
Common stock dividends declared	—	—	—	(2,507)	—	—	(2,507)
Stock options exercised	18	—	707	—	—	—	707
Conversion of restricted stock units	39	1	296	—	—	—	297
Share-based plan compensation	—	—	3,807	—	—	—	3,807
Issuance of common stock to acquire business	3,283	33	143,734	—	—	—	143,767
BALANCE AT DECEMBER 31, 2017	19,785	\$ 212	\$ 438,721	\$ 274,243	\$ (36,730)	\$ (74,472)	\$ 601,974
Net loss	—	—	—	(39,384)	—	—	(39,384)
Cumulative effect adjustment related to the adoption of revenue recognition standard (ASC 606)	—	—	—	(2,757)	—	—	(2,757)
Other comprehensive income, net of tax	—	—	—	—	(33,009)	—	(33,009)
Stock options exercised	18	—	690	—	—	—	690
Conversion of restricted stock units	42	—	291	—	—	—	291
Share-based plan compensation	—	—	4,971	—	—	—	4,971
Measurement period change in fair value of common stock to acquire a business	—	—	(3,783)	—	—	—	(3,783)
BALANCE AT DECEMBER 31, 2018	19,845	\$ 212	\$ 440,890	\$ 232,102	\$ (69,739)	\$ (74,472)	\$ 528,993
Net loss	—	—	—	(133,935)	—	—	(133,935)
Cumulative effect adjustment related to adoption of ASC 842	—	—	—	1,113	—	—	1,113
Other comprehensive income, net of tax	—	—	—	—	(10,528)	—	(10,528)
Stock options exercised	6	—	253	—	—	—	253
Conversion of restricted stock units	61	1	(65)	—	—	—	(64)
Share-based plan compensation	—	—	5,579	—	—	—	5,579
BALANCE AT DECEMBER 31, 2019	19,912	\$ 213	\$ 446,657	\$ 99,280	\$ (80,267)	\$ (74,472)	\$ 391,411

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



**CIRCOR INTERNATIONAL, INC.**  
**Notes to Consolidated Financial Statements**

**(1) Description of Business**

CIRCOR International, Inc. ("CIRCOR" or the "Company" or "we") designs, manufactures and distributes a broad array of flow and motion control products and certain services to a variety of end-markets for use in a wide range of applications to optimize the efficiency and/or ensure the safety of flow control systems. We have a global presence and operate major manufacturing facilities in North America, Western Europe, Morocco, and India.

As of December 31, 2019, we organized our business segment reporting structure into three segments: CIRCOR Energy ("Energy"), CIRCOR Aerospace and Defense ("Aerospace and Defense") and CIRCOR Industrial ("Industrial"). Refer to Note 19, Business Segment and Geographical Information, for further information about our segments.

During 2018 and 2019, the Company entered into several significant transactions as described below.

In November 2018, the Company sold its Rosscor B.V. and SES International B.V. subsidiaries (the "Delden Business") for a nominal amount. The Delden Business was our Netherlands-based fluid handling skids and systems business, primarily for the oil and gas end market. We maintain a 19.9% interest in the Delden Business, as well as the intellectual property rights to our two-screw pump product line. The Company determined that the accounting for this transaction is not material to our consolidated financial statements.

In January 2019, the Company sold its Reliability Services ("RS") business for approximately \$85 million in cash, on a cash-free, debt-free basis, subject to working capital and other adjustments of approximately \$(5) million. The RS business provided lubrication management, chemical flushing services, and oil misting equipment to the oil and gas industry. The RS business was acquired as part of the acquisition of the Colfax Fluid Handling ("FH") business, which is described further in Note 5, Business Acquisitions. The disposal group did not meet the criteria to be classified as discontinued operations. However, it did meet the criteria for presentation as held for sale. Accordingly, the RS assets and liabilities were collapsed as held for sale within our consolidated balance sheet at December 31, 2018.

In July 2019, the Company sold its Engineered Valves ("EV") business for a nominal amount, with an earnout of 50% of net income over seven years up to a maximum of \$20.6 million (€18 million). The EV business is a long-cycle upstream oil and gas engineered value business. The disposal group met the criteria to be classified as discontinued operations, and is recorded as such within our consolidated financial statements. All prior period comparative financial information has been reclassified to conform with this presentation.

In August 2019, the Company sold certain assets and liabilities related to our Spence and Nicholson product lines for \$84.5 million, subject to adjustment for working capital and other specified items of approximately \$(0.5) million. The Spence and Nicholson product lines include steam regulators, control valves, safety relief valves, temperature regulators, steam traps and other steam accessories and solutions. The disposal group did not meet the criteria to be classified as discontinued operations.

In September 2019, the Company obtained approval from its Board of Directors to dispose of the Distributed Valves ("DV") business in a transaction or transfer to a third-party purchaser or purchasers. The DV business is a long-cycle upstream oil and gas engineered valve business. The disposal group met the criteria to be classified as held for sale and a discontinued operation, and is recorded as such within our consolidated financial statements. All prior period comparative financial information has been reclassified to conform with this presentation. As of December 31, 2019, the Company has not yet secured a buyer for the DV business but is actively marketing the business for sale. The Company anticipates completing the disposition within twelve months.

In December 2019, the Company entered into a definitive agreement to dispose of a non-core business, Instrumentation and Sampling ("I&S") business. The I&S business manufactures fittings, regulators sampling systems and valves. The disposal group did not meet the criteria to be classified as a discontinued operation. However, it did meet the criteria for presentation as held for sale. Accordingly the I&S assets and liabilities were collapsed as held for sale within the consolidated balance sheet at December 31, 2019. In January 2020, the Company completed the sale of the I&S business to Crane Co. for \$172 million in cash, subject to a working capital adjustment. See Note 23, Subsequent Events.

For more information on the discontinued operations and held for sale transactions, see Note 3, Discontinued Operations and Assets Held for Sale.

Throughout this Annual Report on Form 10-K, unless otherwise indicated, amounts and activity are presented on a continuing operations basis.

## **(2) Summary of Significant Accounting Policies**

### **Principles of Consolidation and Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”). The consolidated financial statements include the accounts of CIRCOR and its subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation. The results of companies acquired or divested are included in the consolidated financial statements from the date of acquisition or up to the date of disposal. Certain reclassifications have been made to prior period amounts to conform to the current period financial statement presentation, including the results of discontinued operations and reportable segment information. These reclassifications have no effect on the previously reported net (loss) income.

### **Assets and Liabilities Held for Sale**

The Company classifies assets and liabilities (disposal groups) to be sold as held for sale in the period in which all of the following criteria are met: management, having the authority to approve the action, commits to a plan to sell the disposal group; the disposal group is available for immediate sale in its present condition subject to terms customary for sales of such disposal groups; an active program to locate a buyer and other actions required to complete the plan to sell the disposal group have been initiated; the sale of the disposal group is probable, and transfer of the disposal group is expected to qualify for recognition as a completed sale within one year; the disposal group is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

The Company initially measures a disposal group that is classified as held for sale at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held for sale criteria are met. Conversely, gains are not recognized on the sale of a disposal group until the date of sale. The Company assesses the fair value of a disposal group, less any costs to sell, each reporting period it remains classified as held for sale and reports any subsequent changes as an adjustment to the carrying value of the disposal group, as long as the new carrying value does not exceed the carrying value of the disposal group at the time it was initially classified as held for sale.

Upon determining that a disposal group meets the criteria to be classified as held for sale, the Company reports the assets and liabilities of the disposal group, if material, in the line items assets held for sale and liabilities held for sale in the consolidated statements of financial position. Refer to Note 3, Discontinued Operations and Assets Held for Sale, for further information.

### **Use of Estimates**

The preparation of these financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying disclosures. Some of the more significant estimates relate to acquisition accounting, estimated total costs for ongoing long-term contracts accounted for as performance obligations where transfer of control occurs over time, inventory valuation, share-based compensation, amortization and impairment of long-lived assets, fair value of disposal group, pension benefits obligations, income taxes, penalty accruals for late shipments, asset valuations, and product warranties. While management believes that the estimates and assumptions used in the preparation of the financial statements are appropriate, actual results could differ materially from those estimates.

### **Revenue Recognition**

The Company recognizes revenue to depict the transfer of control to the Company’s customers in an amount reflecting the consideration the Company expects to be entitled to in exchange for performance obligations. In order to apply this revenue recognition principle, the Company applies the following five step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when, or as, a performance obligation is satisfied. See Note 4, Revenue Recognition for further information.

Revenues disclosed for 2017 were accounted for in accordance with Accounting Standard Codification ("ASC") Topic 605. Under this standard, revenue was primarily recognized when title and risk of loss have passed to the customer, persuasive evidence of an arrangement exists, no significant post-delivery obligations remain, the price to the buyers is fixed or determinable and collection of the resulting receivable is reasonably assured.

Revenues and costs on certain long-term capital contracts are recognized on the percentage-of-completion method measured on the basis of costs incurred to estimated total costs for each contract. This method is used because management considers it to be the best available measure of progress towards completion on these contracts. Revenues and costs on contracts are subject to changes in estimates throughout the duration of the contracts, and any required adjustments are made in the period in which a change in estimate becomes known. Estimated losses on contracts in progress are recognized in the period in which a loss becomes known. Unbilled receivables for net revenues recognized in excess of the amounts billed for active projects are recognized within other current assets on the balance sheet.

The Company provides for the estimated costs to fulfill customer warranty obligations upon the recognition of the related revenue. Shipping and handling costs invoiced to customers are recorded as components of revenues and the associated costs are recorded as cost of revenues. We recognize revenue net of sales returns, rebates, penalties, and discounts. Accounts receivable allowances include sales returns and bad debt allowances. The Company monitors and tracks the amount of product returns and reduces revenue at the time of shipment for the estimated amount of such future returns, based on historical experience. The Company continuously monitors collections and payments from its customers and maintains a provision for estimated credit losses based upon its historical experience and any specific customer collection issues that it has identified. Account balances are charged off against the allowance when the Company believes it is probable the receivable will not be recovered.

## Goodwill

Goodwill is measured as the excess of the cost of acquisition over the sum of the amounts assigned to identifiable tangible and intangible assets acquired less liabilities assumed. We perform an impairment assessment for goodwill at the reporting unit level on an annual basis as of the end of our October month end or more frequently if circumstances warrant. Our annual impairment assessment requires a comparison of the fair value of each of our reporting units to the respective carrying value. If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired. If the carrying value of a reporting unit is greater than its fair value, an impairment loss will be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. Additionally, we will consider the income tax effect from any tax-deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss.

Determining the fair value of a reporting unit is subjective and requires the use of significant estimates and assumptions. With the assistance of an independent third-party appraisal firm, we estimate the fair value of our reporting units using an income approach based on the present value of future cash flows. We believe this approach yields the most appropriate evidence of fair value. We also utilize the comparable company multiples method and market transaction fair value method to validate the fair value amount we obtain using the income approach. The key assumptions utilized in our discounted cash flow model include our estimates of the rate of revenue growth, including the rate of growth used in terminal year value, as well as the discount rate based on a weighted average cost of capital. Any unfavorable material changes to these key assumptions could potentially impact our fair value determinations.

For additional information, see Note 10, Goodwill and Other Intangible Assets.

## Cost of Revenues

Cost of revenues primarily reflects the costs of manufacturing and preparing products for sale and, to a much lesser extent, the costs of performing services. Cost of revenues is primarily comprised of the cost of materials, outside processing, inbound freight, production, direct labor and overhead including indirect labor, which are expenses that directly result from the level of production activity at a manufacturing site. Additional expenses that directly result from the level of production activity at a manufacturing site include purchasing and receiving costs, inspection costs, warehousing costs, internal transfer costs, utility expenses, property taxes, amortization of inventory step-up from revaluation at the date of acquisition, depreciation of production building and equipment assets, warranty costs, salaries and benefits paid to plant manufacturing management and maintenance supplies.

## Inventories

Inventories are stated at the lower of cost or net realizable value. Where appropriate, standard cost systems are utilized for purposes of determining cost; the standards are adjusted as necessary to ensure they approximate actual cost. Cost is generally determined on the first-in, first-out (“FIFO”) basis. We typically analyze our inventory aging and projected future usage on a quarterly basis to assess the adequacy of our inventory valuation reserve, which primarily consists of obsolescence and net realizable value estimates. These estimates are measured either on an item-by-item basis or higher-level inventory grouping and determined based on the difference between the cost of the inventory and estimated net realizable value. The provision for inventory valuation reserves is a component of our cost of revenues. Assumptions about future demand are among the primary factors utilized to estimate market value. At the point of the loss recognition, a new, lower-cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis. Only subsequent inventory transactions via sale or disposal would then release the established inventory reserve.

If there were to be a sudden and significant decrease in demand for our products, significant price reductions, or a higher incidence of inventory obsolescence for any reason, including a change in technology or customer requirements, we could be required to increase our inventory valuation reserves, which could adversely affect our gross profits.

## Business Acquisitions

We account for business combinations under the acquisition method, and accordingly, the assets and liabilities of the acquired businesses are recorded at their estimated fair value on the acquisition date with the excess of the purchase price over their estimated fair value recorded as goodwill. We determine acquisition related asset and liability fair values through established valuation techniques for industrial manufacturing companies and utilize third party valuation firms to assist in the valuation of certain tangible and intangible assets.

The definition of a business introduces a “screen test” that is a quantitative threshold for defining asset acquisitions. If substantially all of the acquisition is made up of one asset or several similar assets, then the acquisition is an asset acquisition. “Substantially all” is commonly considered to be approximately 90%. While it is not a bright line, if it meets or exceeds the threshold it’s an asset acquisition. Otherwise, the analysis must continue through the “full model.” This means that the structure of the transaction will be important in determining the accounting result.

The consideration for our acquisitions may include future payments that are contingent upon the occurrence of a particular event. For acquisitions that qualify as business combinations, we record an obligation for such contingent payments at fair value on the acquisition date. We estimate the fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and thus the likelihood of making related payments or by using a Monte Carlo simulation model. We revalue these contingent consideration obligations each reporting period. Changes in the fair value of our contingent consideration obligations are recognized within general and administrative expenses in our consolidated statements of income.

ASC Topic 805, Business Combinations, provides guidance regarding business combinations and requires acquisition-date fair value measurement of identifiable assets acquired, liabilities assumed, and non-controlling interests in the acquiree. For additional information, see Note 5, Business Acquisitions.

## Legal Contingencies

We are currently involved in various legal claims and legal proceedings, some of which may involve substantial dollar amounts. Periodically, we review the status of each significant matter and assess our potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be estimated, we accrue a liability for the estimated loss. The determination of probability and the determination as to whether exposure can be reasonably estimated requires management estimates. Because of uncertainties related to these matters, accruals are based on the best information available at the time. As additional information becomes available, we reassess the potential liability related to our pending claims and litigation and may revise our estimates. Such revisions in the estimates of the potential liabilities could have a material adverse effect on our business, results of operations and financial position.

For more information see Note 17, Contingencies, Commitments and Guarantees.

## Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets, such as trade names, are generally recorded and valued in connection with a business acquisition. For these assets, we perform a qualitative assessment on an annual basis to determine if it is more likely than not the asset is impaired ("Step 0" test). These assets are reviewed at least annually for impairment as of the October month end, or more frequently if facts and circumstances warrant. For any that fail the Step 0 test, we perform an impairment assessment at the asset level utilizing a fair value calculation. Determining the fair value is subjective and requires the use of significant estimates and assumptions. With the assistance of an independent third-party appraisal firm, we estimate the fair value using an income approach based on the present value of future cash flows. We note the fair value of each individual indefinite-lived asset exceeded the respective carrying amount, and no intangible impairments were recorded.

For more information see Note 10, Goodwill and Other Intangible Assets.

## Other Long-Lived Assets

In accordance with ASC Topic 360, Plant, Property, and Equipment, we perform impairment analyses of long-lived asset groups whenever events and circumstances indicate impairment. If indicators are present, we perform a recoverability test by comparing the sum of the undiscounted future cash flows specific to the asset group to its carrying value. If the recoverability test fails (sum of undiscounted cash flows are less than the asset group's carrying value), we then determine the fair value of the asset group and recognize an impairment loss if the carrying value exceeds the calculated fair value. For more information, see Note 9, Property, Plant and Equipment.

## Post-Retirement Benefits

Pensions and other post-retirement benefit obligations and net periodic benefit costs are actuarially determined and are affected by several assumptions including the discount rate, mortality, and the expected long-term return on plan assets. Changes in assumptions and differences from actual results will affect the amounts of net periodic benefit cost recognized in future periods. These assumptions may also effect the amount and timing of future cash contributions.

As required in the recognition and disclosure provisions of ASC Topic 715, Compensation - Retirement Benefits, the Company recognizes the over-funded or under-funded status of defined benefit post-retirement plans in its balance sheet, measured as the difference between the fair value of plan assets and the benefit obligations (the projected benefit obligation for pension plans and the accumulated post-retirement benefit obligation for other post-retirement plans). The change in the funded status is the net of the recognized net periodic benefit cost, cash contributions to the trust/benefits paid directly by the Company and recognized changes in other comprehensive income. Other comprehensive income changes are due to new actuarial gains and losses, new plan amendments and the amortizations of amounts in the net periodic benefit cost.

Unrecognized actuarial gains and losses in excess of the 10% corridor (defined as the threshold above which gains or losses need to be amortized) are being recognized for all plans over the weighted average expected remaining service period of the employee group unless substantially all participants are inactive in which case the average remaining lifetime of covered participants is used. Unrecognized actuarial gains and losses arise from several factors including changes in the benefit obligations from actuarial experience and assumption changes and from the difference between expected returns and actual returns on plan assets.

## Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recognized if we anticipate that it is more likely than not that we may not realize some or all of a deferred tax asset.

In accordance with the provisions of ASC Topic 740, Income Taxes, the Company initially recognizes the financial statement effect of a tax position when, based solely on its technical merits, it is more likely than not (a likelihood of greater than fifty percent) that the position will be sustained upon examination by the relevant taxing authority. Those tax positions failing to qualify for initial recognition are recognized in the first interim period in which they meet the more likely than not standard, are resolved through negotiation or litigation with the taxing authority, or upon expiration of the statute of limitations. De-

recognition of a tax position that was previously recognized occurs when an entity subsequently determines that a tax position no longer meets the more likely than not threshold of being sustained.

If future results of operations exceed our current expectations, our existing tax valuation allowances may be adjusted, resulting in future tax benefits. Alternatively, if future results of operations are less than expected, future assessments may result in a determination that some or all of the deferred tax assets are not realizable. Consequently, we may need to establish additional tax valuation allowances for a portion or all of the gross deferred tax assets, which may have a material adverse effect on our results of operations.

Under ASC Topic 740, only the portion of the liability that is expected to be paid within one year is classified as a current liability. As a result, liabilities expected to be resolved without the payment of cash (e.g., due to the expiration of the statute of limitations) or are not expected to be paid within one year are classified as non-current. It is the Company's policy to record estimated interest and penalties as income tax expense, and tax credits as a reduction in income tax expense.

With respect to global intangible low-taxed income ("GILTI"), the Company has adopted a policy to account for this provision as a period cost. Also, the Company has adopted the impact of Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU ") 2018-05 in our financial statements.

For additional information, see Note 11, Income Taxes.

#### Share-Based Compensation

Share-based compensation costs are based on the grant date fair value estimated in accordance with the provisions of ASC Topic 718, Accounting for Share Based Payments, and these costs are recognized over the requisite vesting period. The Black-Scholes option pricing model is used to estimate the fair value of each stock option at the date of grant. Black-Scholes utilizes assumptions related to volatility, the risk-free interest rate, the dividend yield and employee exercise behavior. Expected volatilities utilized in the model are based on the historic volatility of the Company's stock price. The risk-free interest rate is derived from the U.S. Treasury Yield curve in effect at the time of the grant. The model incorporates exercise and post-vesting forfeiture assumptions based on an analysis of historical data.

Market condition stock option awards include both a service period and a market performance vesting condition. The stock options vest if certain stock price targets are met based on the stock price closing at or above the target for 60 consecutive trading days. Vested options may be exercised 25% at the time of vesting, 50% one year from the date of vesting and 100% two years from the date of vesting. These market condition stock option awards are being expensed utilizing a graded method and are subject to forfeiture in the event of employment termination (whether voluntary or involuntary) prior to vesting. To the extent that the market conditions above (stock price targets) are not met, those options will not vest and will forfeit 5 years from the grant date. The Company used a Monte Carlo simulation option pricing model to value these option awards.

For additional information, see Note 14, Share-Based Compensation.

#### Environmental Compliance and Remediation

Environmental expenditures that relate to current operations are expensed or capitalized as appropriate. Expenditures that relate to existing conditions caused by past operations, which do not contribute to current or future revenue generation, are expensed. Expenditures that meet the criteria of "Regulated Operations" are capitalized. Liabilities are recorded when environmental assessments and/or remedial efforts are probable and the costs can be reasonably estimated. In accordance with ASC Topic 450, Contingencies, estimated costs are based upon current laws and regulations, existing technology and the most probable method of remediation.

#### Foreign Currency and Foreign Currency Contracts

Our international subsidiaries operate and report their financial results using local functional currencies. Accordingly, all assets, liabilities, revenues, and costs of these subsidiaries are translated into United States ("U.S.") dollars using exchange rates in effect at the end of the relevant periods. The resulting translation adjustments are presented as a separate component of other comprehensive income. We do not provide for U.S. income taxes on foreign currency translation adjustments since we do not provide for such taxes on undistributed earnings of foreign subsidiaries.

The Company is exposed to certain risks relating to its ongoing business operations including foreign currency exchange rate risk and interest rate risk. The Company currently uses derivative instruments to manage foreign currency risk on certain

business transactions denominated in foreign currencies. To the extent the underlying transactions hedged are completed, these forward contracts do not subject us to significant risk from exchange rate movements because they offset gains and losses on the related foreign currency denominated transactions. These forward contracts do not qualify as hedging instruments and, therefore, do not qualify for fair value or cash flow hedge treatment. Any gains and losses on our contracts are recognized as a component of other expense in our consolidated statements of income.

The Company is subject to exchange rate adjustments resulting from foreign currency transactions. Our net foreign exchange losses / (gains) recorded for the years ended December 31, 2019, 2018 and 2017 were \$(0.4) million, \$(1.7) million, and \$0.8 million, respectively and are included in other (income) expense in the consolidated statements of income.

For additional information, see Note 13, Financing Arrangements.

#### Earnings Per Common Share

Basic earnings per common share is calculated by dividing net income by the number of weighted average common shares outstanding. Diluted earnings per common share is calculated by dividing net income by the weighted average common shares outstanding and assumes the conversion of all dilutive securities when the effects of such conversion would not be anti-dilutive.

Earnings per common share and the weighted average number of shares used to compute net earnings per common share, basic and assuming full dilution, are reconciled below (in thousands, except per share data):

	Year Ended December 31,								
	2019			2018			2017		
	Net Income	Shares	Per Share Amount	Net Income	Shares	Per Share Amount	Net Income	Shares	Per Share Amount
Basic EPS	\$ (133,935)	19,903	\$ (6.73)	\$ (39,384)	19,834	\$ (1.99)	\$ 11,789	16,674	\$ 0.71
Dilutive securities, principally common stock options	—	—	—	—	—	—	—	175	(0.01)
Diluted EPS	\$ (133,935)	19,903	\$ (6.73)	\$ (39,384)	19,834	\$ (1.99)	\$ 11,789	16,849	\$ 0.70

Certain stock options to purchase common shares and restricted stock units ("RSUs") were anti-dilutive. There were 431,165 anti-dilutive stock options, RSUs, and RSUs under our management stock purchase plan for the year ended December 31, 2019 with exercise prices ranging from \$33.63 to \$71.56. There were 1,041,454 anti-dilutive stock options and RSUs for the year ended December 31, 2018 with exercise prices ranging from \$26.06 to \$71.56. There were 252,001 anti-dilutive stock options and RSUs for the year ended December 31, 2017 with exercise prices ranging from \$51.84 to \$71.56.

As of December 31, 2019, there were 11,135 outstanding RSUs that contain rights to nonforfeitable dividend equivalents and are considered participating securities that are included in our computation of basic and fully diluted earnings per share.

#### Cash and Cash Equivalents

Our cash equivalents are invested in time deposits of financial institutions. We have established guidelines relative to credit ratings, diversification and maturities that are intended to maintain safety and liquidity. Cash equivalents include highly liquid investments with maturity periods of three months or less when purchased. Restricted cash represents cash that is legally restricted as to withdrawal or usage.

#### Restricted Cash

Restricted cash represents cash that is legally restricted as to withdrawal or usage and includes amounts required to be maintained in relation to employment laws in certain jurisdictions.

#### Other Assets

Other assets in the accompanying consolidated balance sheets include deferred debt issuance costs associated with our revolving credit facility, tax receivable and other certain assets.

## Fair Value

ASC Topic 820, Fair Value Measurement, defines fair value and includes a framework for measuring fair value and disclosing fair value measurements in financial statements. Fair value is a market-based measurement rather than an entity-specific measurement. The fair value hierarchy makes a distinction between assumptions developed based on market data obtained from independent sources (observable inputs) and the reporting entity's own assumptions (unobservable inputs). This hierarchy prioritizes the inputs into three broad levels as follows:

**Level One:** Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets.

**Level Two:** Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

**Level Three:** Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Fair value information for those assets and liabilities, including their classification in the fair value hierarchy, is included in: Note 13, Financing Arrangements (for fair value of debt and interest- rate swaps) along with Derivative Financial Instruments (for cross-currency hedges), and Note 16, Retirement Plans (for assets held in trust).

Certain pension plan asset investments are measured at fair value using the net asset value per share (or its equivalent) practical expedient (the "NAV"). The carrying amounts of cash and cash equivalents, trade receivables and trade payables approximate fair value because of the short maturity of these financial instruments. Cash equivalents are carried at cost which approximates fair value at the balance sheet date and is a Level 1 financial instrument.

## Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation is generally provided on a straight-line basis over the estimated useful lives of the assets, which typically range from 3 to 40 years for buildings and improvements, 1 to 10 years for manufacturing machinery and equipment, and 3 to 7 years for computer equipment and software. Motor vehicles and furniture and fixtures are typically depreciated over 5 years. Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or estimated useful life of the asset. Repairs and maintenance costs are expensed as incurred.

The Company reports depreciation of property, plant and equipment in cost of revenue and selling, general and administrative expenses based on the nature of the underlying assets. Depreciation primarily related to equipment used in the production of inventory is recorded in cost of revenue. Depreciation related to selling and administrative functions is reported in selling, general and administrative expenses.

See Note 9, Property, Plant and Equipment for additional information.

## Research and Development

Research and development expenditures, including certain engineering costs, are expensed when incurred and are included in selling, general and administrative expenses. Our research and development expenditures for the years ended December 31, 2019, 2018 and 2017 were \$7.6 million, \$8.5 million and \$5.2 million, respectively.

## Sale of Receivables

During the third quarter of 2019, the Company entered into a receivables purchasing agreement with a bank whereby the Company can sell selected account receivables and receive between 90% to 100% of the purchase price upfront, net of applicable discount fee, and the residual amount as the receivables are collected. During the year, the Company sold a total of \$34.4 million in receivables under the program, receiving \$32.2 million in cash. The outstanding purchase price component of \$2.2 million was recorded in prepaid expenses and other current assets on the consolidated balance sheet at December 31, 2019.



## New Accounting Standards

### *Adopted*

In September 2019, we elected to early-adopt the FASB ASU 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. This ASU simplifies how entities assess goodwill for impairment by eliminating Step 2 from the goodwill impairment test. The goodwill impairment test, as amended, will consist of one step comparing the fair value of a reporting unit to its carrying amount.

On January 1, 2019, we adopted the FASB ASU 2016-02, Leases, and all related amendments ("ASC Topic 842"), under the modified retrospective approach. Consequently, periods prior to January 1, 2019 are not restated for the adoption of ASC Topic 842. In addition, we elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allowed us to carry forward the historical lease classification.

Adoption of the new standard resulted in the recording of additional Right-of-Use ("ROU") assets and lease liabilities of \$10.7 million and \$10.9 million, respectively, as of January 1, 2019. ROU assets represent our right to use an underlying asset for the lease term, and the lease liabilities represent our obligation to make lease payments arising from the lease. The difference between the additional lease assets and lease liabilities was recorded as an adjustment to deferred rent and prepaid rent. The standard did not materially impact our consolidated net earnings. See Note 7, Leases for further information.

On January 1, 2018, we adopted the FASB ASU 2014-09, Revenue from Contracts with Customers and all the related amendments ("ASC Topic 606" or the "new revenue standard") using the modified retrospective transition approach. The new revenue standard provides for a single comprehensive model to use in accounting for revenue arising from contracts with customers and replaced most previously existing revenue recognition guidance in GAAP. We recognized the cumulative effect of adopting the new revenue standard as an adjustment to the opening balance of retained earnings as of January 1, 2018. The comparative periods presented have not been restated and continue to be reported under the accounting standards in effect for those periods.

### *Not Yet Adopted*

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses rather than incurred losses to estimate credit losses on certain types of financial instruments, including trade receivables. The ASU is effective for public entities for fiscal years beginning after December 15, 2019, with early adoption permitted.

The Company will adopt the standard effective January 1, 2020 using a modified retrospective approach through a cumulative-effect adjustment to retained earnings. The adoption of the standard is not expected to have a material impact on our consolidated financial statements.

## **(3) Discontinued Operations and Assets Held for Sale**

### Discontinued Operations

During the third quarter of 2019, the Company instituted a strategic shift to exit the upstream oil and gas valves market to focus on more attractive end markets. In line with that shift, during the third quarter of 2019 the Company sold its EV business and classified its DV business as held for sale. These businesses were previously part of the Energy segment.

In accordance with ASC Topic 205-20, Presentation of Financial Statements - Discontinued Operations, the Company determined that the EV and DV businesses represented a strategic shift that has or will have a major effect on the Company's operations and financial results. As a result, these businesses met the conditions for discontinued operations and are recorded as such in the consolidated financial statements. All prior period comparative financial information has been reclassified to conform to this presentation. We report financial results for discontinued operations separately from continuing operations in order to distinguish the financial impact of the disposal transactions from ongoing operations.

Upon classifying the DV business as held for sale, the Company was required to measure the disposal group at the lower of its carrying value or fair value less expected costs to sell. The Company calculated fair value of the DV business using an income

approach based on the present value of projected future cash flows. This approach incorporates several key assumptions which include the rate of revenue growth including the rate of growth used in the terminal year value, the projected operating margin, as well as the discount rate based on a weighted average cost of capital. Any unfavorable material changes to these key assumptions could potentially impact our fair value determinations. Through this process, the Company determined that the carrying value exceeded fair value and recognized a goodwill impairment of \$6.9 million and an intangible asset impairment of \$1.0 million. At December 31, 2019, the Company recognized a valuation allowance of \$39.8 million to adjust the carrying value of the disposal group to its fair value less expected costs to sell.

The following table presents the summarized components of (loss) income from discontinued operations, for the EV and DV businesses for the twelve months ended December 31, 2019, 2018 and 2017 (in thousands):

	Twelve Months Ended		
	December 31, 2019	December 31, 2018	December 31, 2017
Net revenues	\$ 79,848	\$ 162,355	\$ 156,218
Cost of revenues	105,132	145,908	128,072
Gross (loss) profit	(25,284)	16,447	28,146
Selling, general and administrative expenses	15,487	23,786	19,723
Special and restructuring charges, net (1)	85,603	4,930	4,162
Operating (loss) income	(126,374)	(12,269)	4,261
Other (income) expense:			
Interest (income), net	(8)	(62)	(64)
Other (income) expense, net	(378)	(9)	1,852
Total other (income) expense, net	(386)	(71)	1,788
(Loss) income from discontinued operations, pre tax	(125,988)	(12,198)	2,473
(Benefit from) provision for income tax	(16,821)	(6,161)	1,535
(Loss) income from discontinued operations, net of tax	\$ (109,167)	\$ (6,037)	\$ 938

(1) For the year ended December 31, 2019, includes a valuation allowance of \$39.8 million for the DV business, loss on sale of the EV business of \$37.9 million, and goodwill and intangible asset impairments related to the DV business of \$7.9 million.

#### Assets Held for Sale

In addition to its businesses classified as discontinued operations, the Company has other disposal groups that meet the requirements of ASC 360-10 to be classified as held for sale in its consolidated balance sheets. In December 2019, the Company entered into a definitive agreement to dispose of its I&S business. The disposal group met the requirements to be classified as held for sale in the Company's consolidated balance sheet as of December 31, 2019. In accordance with ASC 360-10, prior period results have not been restated to reflect the I&S business as held for sale.

In January 2019, the Company sold its RS business. This disposal group met the requirements for classification as held for sale in the Company's consolidated balance sheet as of December 31, 2018.

The following table presents the balance sheet information for assets and liabilities held for sale as of December 31, 2019 and December 31, 2018 (in thousands):

	December 31, 2019			December 31, 2018		
	Discontinued Operations (1)	Other Held for Sale (2)	Total	Discontinued Operations (1)	Other Held for Sale (2)	Total
Trade accounts receivable, net	\$ 467	\$ 9,935	\$ 10,402	\$ 16,371	\$ 12,341	\$ 28,712
Inventories	55,521	13,878	69,399	73,696	3,044	76,740
Prepaid expenses and other current assets	2,867	616	3,483	19,230	1,602	20,832
Property, plant, and equipment, net	6,742	6,409	13,151	12,127	12,542	24,669
Goodwill	—	91,492	91,492	8,600	40,372	48,972
Intangibles	—	—	—	1,021	17,209	18,230
Deferred tax asset	778	1,089	1,867	8,556	824	9,380
Other assets	4,793	6,363	11,156	70	7	77
Valuation adjustment on classification to assets held for sale	(39,757)	—	(39,757)	—	—	—
Classified as current (3)	31,411	129,782	161,193	109,297	87,941	197,238
Classified as noncurrent	—	—	—	30,374	—	30,374
Total assets held for sale	\$ 31,411	\$ 129,782	\$ 161,193	\$ 139,671	\$ 87,941	\$ 227,612
Accounts payable	\$ 8,708	\$ 5,997	\$ 14,705	\$ 29,166	\$ 3,370	\$ 32,536
Accrued and other current liabilities	5,834	2,192	8,026	17,991	5,576	23,567
Deferred income taxes	638	151	789	325	—	325
Other noncurrent liabilities	13,931	5,838	19,769	536	2,195	2,731
Classified as current (3)	29,111	14,178	43,289	47,157	11,141	58,298
Classified as noncurrent	—	—	—	861	—	861
Total liabilities held for sale	\$ 29,111	\$ 14,178	\$ 43,289	\$ 48,018	\$ 11,141	\$ 59,159

(1) Reflects the assets and liabilities of the DV disposal group at December 31, 2019, and the assets and liabilities of the DV and EV disposal groups at December 31, 2018.

(2) Reflects the assets and liabilities of disposal groups that did not meet the criteria to be classified as discontinued operations. At December 31, 2019, the balances consist of assets and liabilities of the I&S disposal group. At December 31, 2018, the balances consist of assets and liabilities related to the RS disposal group, along with a \$4.5 million building that was actively being marketed for sale. The building was sold during 2019.

(3) The Company classified all assets and liabilities held for sale as current on the December 31, 2019 consolidated balance sheet because it is probable that these assets will be sold within one year. Similarly, the Company classified all assets and liabilities associated with RS disposal group and a building being marketed for sale as current on the December 31, 2018 consolidated balance sheet. For the assets and liabilities that were reclassified to discontinued operations as of December 31, 2018, the Company maintained the current and noncurrent classification from its historical consolidated balance sheet.

#### (4) Revenue Recognition

Our revenue is derived from a variety of contracts. A significant portion of our revenues are from contracts associated with the design, development, manufacture or modification of highly engineered, complex and severe environment products with customers who are either in or service the energy, aerospace, defense and industrial markets. Our contracts within the defense markets are primarily with U.S. military customers. Our contracts with the U.S. military customers typically are subject to the Federal Acquisition Regulations. We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Contracts may be modified to account for changes in contract specifications and requirements. Contract modifications exist when the modification either creates new, or changes the existing, enforceable rights and obligations. Contract modifications for goods or services that are not distinct from the existing contract are accounted for as if they were part of that existing contract. In these cases, the effect of the contract modification on the transaction price and the measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis, except when such modifications relate to a performance obligation which is a series of substantially the same distinct goods or services. If the modification relates to a performance obligation for a series of substantially the same distinct goods or services, the modifications are treated

prospectively. Contract modifications for goods or services that are considered distinct from the existing contract are accounted for as separate contracts.

**Performance Obligations.** A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in ASC Topic 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, control is transferred to the customer. Consistent with historical practice, we exclude from the transaction price amounts collected on behalf of third parties (e.g. taxes). Our performance obligations are typically satisfied at a point in time upon delivery and shipping and handling costs are treated as fulfillment costs. To determine the proper revenue recognition method for contracts for highly engineered, complex and severe environment products with right of payment, which meet over-time revenue recognition criteria, we evaluate whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment and the decision to combine a group of contracts or separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. In certain instances, we accounted for contracts using the portfolio approach when the effect of accounting for a group of contracts or group of performance obligations would not differ materially from considering each contract or performance obligation separately. This determination requires the use of estimates and assumptions that reflect the size and composition of the portfolio. For most of our over-time revenue recognition contracts, the customer contracts with us to provide custom products which serve a single project or capability (even if that single project results in the delivery of multiple products) with right of payment. In circumstances where each distinct product in the contract transfers to the customer over time and the same method would be used to measure the entity's progress toward complete satisfaction of the performance obligation to transfer each unit to the customer, we would then apply the series guidance to account for the multiple products as a single performance obligation. Hence, the entire contract is accounted for as one performance obligation. An example of these performance obligations include refinery valves or actuation components and sub-systems. Less commonly, however, we may promise to provide distinct goods or services within the over-time revenue recognition contract, in which case we separate the contract into more than one performance obligation. For all contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. Generally, the contractually stated price is the primary method used to estimate standalone selling price as the good or service is sold separately in similar circumstances and to similar customers for a similar price and discounts are allocated proportionally to each performance obligation. The Company will 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 control to our customers and when the customer fully pays for the related performance obligations will be less than a year.

The majority of our revenue recognized over-time is related to our Refinery Valves business within our Energy segment and certain other businesses that sell customized products to customers that serve the U.S. Department of Defense within our Aerospace & Defense segment and have contract provisions guaranteeing us costs and profit upon customer cancellation. Revenue is recognized over-time using an input measure (i.e., costs incurred to date relative to total estimated costs at completion, known as the "cost-to-cost" method) to measure progress. We generally use the cost-to-cost measure of progress for our contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure of progress, revenues are recorded proportionally as costs are incurred. Contract costs include labor, materials and subcontractors' costs, other direct costs and an allocation of overhead, as appropriate.

On December 31, 2019, we had \$407.8 million of revenue related to remaining performance obligations. We expect to recognize approximately 83% of our remaining performance obligations as revenue during 2020, 12% in 2021, and 5% thereafter.

**Contract Balances.** The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the consolidated balance sheet. Contract assets include unbilled amounts typically resulting from over-time contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts may not exceed their net realizable value. Contract assets are generally classified as current. Generally, payment terms are based on shipment and billing occurs subsequent to revenue recognition, resulting in contract assets for over-time revenue recognition products. However, we sometimes receive advances or deposits from our customers, before revenue is recognized, resulting in contract liabilities. Contract liabilities are generally classified as current. These assets and liabilities are reported net on the consolidated balance sheet on a contract-by-contract basis at the end of each reporting period. Consistent with historical practice, we elected to expense the incremental costs of obtaining a contract when the amortization period for such contracts would have been one year or less.

In order to determine revenue recognized in the period from contract liabilities, we first allocate revenue to the individual contract liabilities balances outstanding at the beginning of the period until the revenue exceeds that balance. If additional

advances are received on those contracts in subsequent periods, we assume all revenue recognized in the reporting period first applies to the beginning contract liabilities as opposed to a portion applying to the new advances for the period.

The opening and closing balances of the Company's contract assets and contract liabilities balances as of December 31, 2018 and December 31, 2019, respectively, are as follows (in thousands):

	December 31, 2019	December 31, 2018	Increase/(Decrease)
Trade accounts receivables, net	\$ 125,422	\$ 167,181	\$ (41,759)
Contract assets (1) (2)	\$ 52,781	\$ 46,912	\$ 5,869
Contract liabilities (3) (4) (5)	\$ 35,007	\$ 41,951	\$ (6,944)

(1) Recorded within prepaid expenses and other current assets.

(2) Contract assets balance as of December 31, 2018 includes \$0.4 million associated with the I&S business, which is classified as held for sale as of December 31, 2019.

(3) Recorded within accrued expenses and other current liabilities

(4) Contract liabilities balance has been adjusted by \$1.4 million associated with RS, which the Company divested during the first quarter of 2019.

(5) Contract liabilities balance as of December 31, 2018 includes \$1.0 million associated with the I&S business, which is classified as held for sale as of December 31, 2019.

The difference in the opening and closing balances of the contract assets and contract liabilities primarily result from the timing difference between the Company's performance and the customer's payment.

Trade account receivables, net decreased \$(41.8) million, or (-25%), to \$125.4 million as of December 31, 2019, primarily driven by the timing of cash collections during the twelve months ended December 31, 2019.

Contract assets increased \$5.9 million, or (+13%), to \$52.8 million, primarily related to unbilled revenue recognized during the twelve months ended December 31, 2019 within our Defense businesses (+9%), North American Pumps business (+3%), and Refinery Valves business (+3%), partially offset by declines within our North American Valves business (-5%).

Contract liabilities decreased \$(6.9) million, or (-17%), to \$35.0 million, primarily driven by declines within our Refinery Valves business (-27%), partially offset by the timing of revenue recognition in our U.S. Defense business (+8%) and Fluid Control business (+3%).

**Contract Estimates.** Accounting for over-time contracts requires reliable estimates in order to estimate total contract revenue and costs. For these contracts, we have a Company-wide standard and disciplined quarterly Estimate at Completion ("EAC") process in which management reviews the progress and execution of our performance obligations. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the delivery schedule (e.g., the timing of shipments), technical requirements (e.g., a highly engineered product requiring sub-contractors) and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, the length of time to complete the performance obligation (e.g. to estimate increases in wages and prices for materials and related support cost allocations), execution by our subcontractors, the availability and timing of funding from our customer and overhead cost rates, among other variables. Based on all of these factors, we estimate the profit on a contract as the difference between the total estimated revenue and EAC costs and recognize the resultant profit over the life of the contract, using the cost-to-cost EAC input method to measure progress toward complete satisfaction of a performance obligation.

The nature of our contracts gives rise to several types of variable consideration, including penalties. We include in our contract estimates a reduction to revenue for customer agreements, primarily in our large projects business, which contain late shipment penalty clauses whereby we are contractually obligated to pay consideration to our customers if we do not meet specified shipment dates. We generally estimate the variable consideration at the most likely amount to which the customer expects to be entitled. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The variable consideration for estimated penalties is based on several factors including historical customer

settlement experience, contractual penalty percentages, and facts surrounding the late shipment. Accruals related to these potential late shipment penalties as of December 31, 2019 and 2018 were \$1.8 million and \$2.0 million, respectively.

A change in one or more of these estimates could affect the profitability of our contracts. We review and update our contract-related estimates regularly. We recognize adjustments in estimated profit on contracts under the cumulative catch-up method. Under this method, the impact of the adjustment on profit recorded to date is recognized in the period the adjustment is identified. Revenue and profit in future periods of contract performance is recognized using the adjusted estimate. If at any time the estimate of contract profitability indicates an anticipated loss on the contract, we recognize the total loss in the quarter it is identified.

The impact of adjustments in contract estimates on our operating earnings can be reflected in either operating expenses or revenue. There were no significant changes in estimates in the twelve months ended December 31, 2019.

**Disaggregation of Revenue.** The following tables presents our revenue disaggregated by major product line and geographical market (in thousands):

Revenue by Major Product Line	Twelve Months Ended	
	December 31, 2019	December 31, 2018
Energy Segment		
Oil & Gas - Upstream, Midstream & Other	\$ 54,818	\$ 67,738
Oil & Gas - Downstream	186,164	221,139
<b>Total</b>	<b>240,982</b>	<b>288,877</b>
Aerospace & Defense Segment		
Commercial Aerospace & Other	124,023	105,914
Defense	148,602	131,103
<b>Total</b>	<b>272,625</b>	<b>237,017</b>
Industrial Segment		
Valves	113,386	117,492
Pumps	337,320	370,084
<b>Total</b>	<b>450,706</b>	<b>487,576</b>
Net Revenue	<b>\$ 964,313</b>	<b>\$ 1,013,470</b>

## Revenue by Geographical Market

		Twelve Months Ended	
		December 31, 2019	December 31, 2018
Energy Segment			
EMEA	\$	83,685	\$ 84,174
North America		118,061	158,649
Other		39,236	46,054
<b>Total</b>		240,982	288,877
Aerospace & Defense Segment			
EMEA		74,657	65,634
North America		172,676	148,968
Other		25,292	22,415
<b>Total</b>		272,625	237,017
Industrial Segment			
EMEA		209,302	238,177
North America		147,912	151,147
Other		93,492	98,252
<b>Total</b>		450,706	487,576
Net Revenue	\$	964,313	\$ 1,013,470

## (5) Business Acquisitions

On September 24, 2017, CIRCOR entered into a Purchase Agreement (the “Purchase Agreement”) with Colfax Corporation (“Colfax”). Pursuant to the Purchase Agreement, on December 11, 2017, the Company acquired the fluid handling business of Colfax ("FH") for consideration consisting of \$542.0 million in cash, 3,283,424 unregistered shares of the Company's common stock, with a fair value of approximately \$140.0 million at closing, and the assumption of net pension and post-retirement liabilities of FH. The Company financed the cash consideration through a combination of committed debt financing and cash on hand. During the second quarter of 2018, the shares were registered and sold with all proceeds going to Colfax.

FH is a leader in the engineering, development, manufacturing, distribution, service and support of fluid handling systems. With a history dating back to 1860, FH is a leading supplier of screw pumps for high demand, severe service applications across a range of markets including general industry, commercial marine, defense, and oil & gas. FH leverages differentiated technology, and provides critical aftermarket customer support, to maintain leading positions in high demand niche markets.

The operating results of FH have been split between each of our operating segments, Energy, Aerospace & Defense, and Industrial based upon the end markets of the sub-businesses within FH.

The purchase price allocation is based upon a valuation of assets and liabilities that was prepared with assistance from a third party valuation specialist. The purchase accounting was finalized in the fourth quarter of 2018.

During 2018, the Company paid Colfax approximately \$2.6 million pursuant to a transition services agreement which facilitated the orderly separation of the FH business from Colfax. Colfax was a significant shareholder of the Company during the first six months of 2018.

The following table summarizes the acquisition date fair value of the assets acquired and the liabilities assumed:

(in thousands)	Preliminary Fair Value of Assets Acquired	Measurement Period Adjustment	Finalized Fair Value of Assets Acquired
Cash and cash equivalents (a)	\$ 63,403	\$ —	\$ 63,403
Restricted cash (a)	1,911	—	1,911
Accounts receivable	77,970	(2,128)	75,842
Inventory	79,329	(402)	78,927
Prepaid expenses and other current assets	16,937	(1,348)	15,589
Property, plant and equipment	115,891	5,033	120,924
Identifiable intangible assets	388,000	(3,000)	385,000
Other assets	338	586	924
Accounts payable	(46,045)	20	(46,025)
Cash payable to seller (a)	(65,314)	—	(65,314)
Accrued and other expenses	(63,115)	(9,273)	(72,388)
Long-term post-retirement liabilities	(143,067)	2,600	(140,467)
Other long-term liabilities	(11,215)	—	(11,215)
Deferred tax liabilities	(4,479)	(10,366)	(14,845)
Total identifiable net assets	410,544	(18,278)	392,266
Goodwill	293,344	8,195	301,539
Total purchase price	\$ 703,888	\$ (10,083)	\$ 693,805

Consideration			
Base purchase price	\$ 542,000	\$ —	\$ 542,000
Net working capital and other purchase accounting adjustments	18,121	(6,300)	11,821
Common Stock	143,767	(3,783)	139,984
Total	\$ 703,888	\$ (10,083)	\$ 693,805

(a) Cash acquired and returned to seller by the second quarter of 2018, net of FX impact of \$2.3 million and cash withheld to pay Colfax obligations to foreign taxing authorities of \$1.8 million.

As illustrated in the table above, during the measurement period we identified certain uncollectible account receivable balances, unsubstantiated prepaid and other assets, certain existence or valuation adjustments to inventory amounts, revised valuation of property, plant, and equipment from our third party specialists, revised valuation of intangibles from our third party specialists, and accrual adjustments primarily relating to a loss contract for which we needed to establish a liability in purchase accounting. Additionally, we settled customary working capital adjustments (\$11.8 million) with Colfax.

The excess of purchase price paid over the fair value of FH's net assets was recorded to goodwill, which is primarily attributable to projected future profitable growth, market penetration, as well as an expanded customer base for the acquired businesses. As of December 31, 2019, approximately 65.5% of goodwill is projected to be deductible for income tax purposes.



The FH acquisition resulted in the preliminary identification of the following identifiable intangible assets (in thousands):

	Original Estimate	Measurement Period Adjustment	Fair Value	Weighted average amortization period (in years)
Customer relationships	\$ 215,000	\$ —	\$ 215,000	19
Acquired technologies	107,000	6,000	113,000	20
Trade names	44,000	(3,000)	41,000	Indefinite-life
Backlog	22,000	(6,000)	16,000	4
Total intangible assets	\$ 388,000	\$ (3,000)	\$ 385,000	

During the measurement period, with the help of third party specialists, we adjusted the fair value of the acquired FH intangibles based upon better information regarding discount rates, royalty rates, and more detailed business unit forecasts that was determinable at the time of acquisition. The revised fair value of acquired FH intangibles have been recorded against our FH opening balance sheet during 2018.

The fair value of the intangible assets was based on variations of the income approach, which estimates fair value based on the present value of cash flows that the assets are expected to generate. These approaches included the relief-from-royalty method and multi-period excess earnings method, depending on the intangible asset being valued. Customer relationships, backlog, and existing technology are amortized on a cash flow basis which reflects the economic benefit consumed. The trade name was assigned an indefinite life based on the Company's intention to keep the trade names for an indefinite period of time. Refer to Note 10, Goodwill and Intangibles, net for future expected amortization to be recorded.

The results of operations of FH have been included in our consolidated financial statements beginning on the acquisition date and reported within the Industrial segment, with the exception of the U.S. Defense business which is reported in the Aerospace & Defense segment and RS business which is reported in the Energy segment. As disclosed in Note 1, Description of Business, the RS business was sold in January 2019. The consolidated results for the year ended December 31, 2018 include \$484.8 million of net revenue and \$6.1 million operating loss. The results for the year ended December 31, 2017 include \$36.5 million of net revenue and a \$1.1 million operating loss.

The following unaudited pro forma information presents the combined results of operations as if the acquisition had been completed on January 1, 2017, the beginning of the comparable prior annual reporting period. The unaudited pro forma results include: (i) amortization associated with preliminary estimates for the acquired intangible assets; (ii) interest expense on borrowings in connection with the acquisition; (iii) the associated tax impact on these unaudited pro forma adjustments; and the transaction costs presented in the earliest period (2017).

The unaudited pro forma results do not reflect any cost saving synergies from operating efficiencies or the effect of the incremental costs incurred in integrating the two companies. Accordingly, these unaudited pro forma results are presented for informational purposes only and are not necessarily indicative of what the actual results of operations of the combined company would have been if the acquisition had occurred at the beginning of the period presented, nor are they indicative of future results of operations (in thousands):

(Unaudited)	Year ended December 31, 2017
Net Revenues	\$ 942,760
Net Income	\$ (6,475)

## (6) Special and Restructuring Charges, net

### Special and Restructuring Charges, net

Special and restructuring charges, net consist of restructuring costs (including costs to exit a product line or program) as well as certain special charges such as significant litigation settlements and other transactions (charges or recoveries) that are described below. All items described below are recorded in Special and restructuring charges, net on our consolidated statements of

(loss) income. Certain other special and restructuring charges such as inventory related items may be recorded in cost of revenues given the nature of the item.

The table below (in thousands) summarizes the amounts recorded within the special and restructuring charges, net line item on the consolidated statements of (loss) income for the periods ending December 31, 2019, 2018, and 2017:

	Special and Restructuring Charges, net for the year ended December 31,		
	2019	2018	2017
Special charges, net	\$ 17,686	\$ 13,061	\$ 7,330
Restructuring charges, net	5,186	5,848	2,559
Total special and restructuring charges, net	<u>\$ 22,872</u>	<u>\$ 18,909</u>	<u>\$ 9,889</u>

#### Special Charges, net

The table below (in thousands) outlines the special charges (recoveries), net recorded for the year ending December 31, 2019:

	Special Charges (Recoveries), net for the year ended December 31, 2019				
	Energy	Aerospace & Defense	Industrial	Corporate	Total
Divestiture- related	\$ (5,868)	\$ —	\$ 9,938	\$ 1,881	\$ 5,951
Professional fees to review and respond to an unsolicited tender offer to acquire the Company	—	—	—	7,345	7,345
Other cost savings initiatives	2,520	—	78	1,792	4,390
Total special charges, net	<u>\$ (3,348)</u>	<u>\$ —</u>	<u>\$ 10,016</u>	<u>\$ 11,018</u>	<u>\$ 17,686</u>

Divestiture-related: The Company incurred net special charges of \$6.0 million for the twelve months ended December 31, 2019, primarily attributed to a gain on the sale of the RS business (in the Energy segment) and losses in the Industrial segment associated with the sale of our Spence and Nicholson product lines. Corporate costs include certain costs associated with these and other divestiture activity.

Professional fees: The Company incurred special charges of \$7.3 million for the twelve months ended December 31, 2019, associated with the review and response to an unsolicited tender offer to acquire the Company.

The table below (in thousands) outlines the special charges, net recorded for the year ending December 31, 2018:

	Special Charges, net for the year ended December 31, 2018				
	Energy	Aerospace & Defense	Industrial	Corporate	Total
Brazil closure	\$ 921	\$ —	\$ —	\$ —	\$ 921
Acquisition and divestiture related charges	—	—	1,888	8,278	10,166
Other cost saving initiatives	986	—	—	988	1,974
Total special charges, net	<u>\$ 1,907</u>	<u>\$ —</u>	<u>\$ 1,888</u>	<u>\$ 9,266</u>	<u>\$ 13,061</u>

Brazil Closure: On November 3, 2015, our Board of Directors approved the closure and exit of our Brazil manufacturing operations due to the economic realities in Brazil and the ongoing challenges with our only significant end customer, Petrobras.

CIRCOR Brazil reported substantial operating losses every year since it was acquired in 2011 while the underlying market conditions and outlook deteriorated. In connection with the closure, we recorded \$0.9 million of charges within the Energy segment during the twelve months ended December 31, 2018, respectively, which relates to losses incurred subsequent to our closure of manufacturing operations during the first quarter of 2016.

Acquisition and divestiture related charges: In November 2018, we sold our Rosscor (see Note 1) business for a nominal amount and recorded a \$1.9 million loss on the transaction. Rosscor was part of the Industrial business. Corporate costs relate to (i) our December 2017 acquisition of FH from Colfax, comprised of internal costs and external professional fees to separate

the FH business from Colfax and integrate the FH business into CIRCOR and (ii) \$2.2 million of transaction costs related to the January 2019 sale of the RS business (see Note 1).

The table below (in thousands) outlines the special charges (recoveries), net recorded for the year ending December 31, 2017:

	Special Charges (Recoveries), net for the year ended December 31, 2017			
	Energy	Aerospace & Defense	Corporate	Total
Acquisition and divestitures related charges	\$ 54	\$ 3,760	\$ 13,096	\$ 16,910
Brazil closure	879	—	—	879
Contingent consideration revaluation	(12,200)	—	—	(12,200)
California Legal Settlement	—	2,400	—	2,400
Other cost saving initiatives	(329)	—	(330)	(659)
Total special charges, net	<u>\$ (11,596)</u>	<u>\$ 6,160</u>	<u>\$ 12,766</u>	<u>\$ 7,330</u>

Acquisition and divestiture related charges:

- On December 11, 2017, we acquired FH. In connection with our acquisition, we recorded \$13.1 million of acquisition related professional fees and debt extinguishment fees during the twelve months ended December 31, 2017.
- On July 7, 2017, we divested our French non-core aerospace build-to-print business within our Advanced Flow Solutions segment as part of our simplification strategy. We measured the disposal group at its fair value less costs to sell, which was lower than its carrying value, and recorded a \$3.8 million charge during the second quarter of 2017. Also, in connection with this disposition we recorded a \$1.5 million of severance included as a restructuring charge.

**Brazil Closure:** In connection with the closure of our Brazil manufacturing operations, we recorded \$0.9 million of charges within the Energy segment during the year ended December 31, 2017, which relates to losses incurred subsequent to our closure of manufacturing operations during the first quarter of 2016.

**Contingent Consideration Revaluation:** On October 12, 2016, we acquired Critical Flow Solutions ("CFS"). The fair value of the earn-out decreased \$12.2 million related to the CFS acquisition during the twelve months ended December 31, 2017. The change in fair value during the year ended December 31, 2017 was recorded as a recovery within the special and restructuring charges (recoveries) line on our consolidated statement of (loss) income. The actual achievement of the earn-out was zero and the earn-out period expired on September 30, 2017.

**California Legal Settlement:** We recorded a special charge of \$2.4 million during the fourth quarter of 2017 related to settlement of a wage and hour claim in our California Aerospace business. The claim was settled on February 21, 2018. Refer to Note 17, Contingencies, Commitments and Guarantees for additional disclosure.

## Restructuring Charges, net

The tables below (in thousands) outline the charges (or any recoveries) associated with restructuring actions recorded for the year ending December 31, 2019, 2018, and 2017. A description of the restructuring actions is provided in the section titled "Restructuring Programs Summary" below.

Restructuring Charges (Recoveries), net as of and for the year ended December 31, 2019				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses	\$ (1,785)	\$ 35	\$ 327	\$ (1,423)
Employee related expenses	604	560	5,445	6,609
Total restructuring charges, net	<u>\$ (1,181)</u>	<u>\$ 595</u>	<u>\$ 5,772</u>	<u>\$ 5,186</u>
Accrued restructuring charges as of December 31, 2018				\$ 874
Total year to date charges, net (shown above)				5,186
Charges paid / settled, net				(861)
Accrued restructuring charges as of December 31, 2019				<u>\$ 5,199</u>

We expect to make payment or settle the majority of the restructuring charges accrued as of December 31, 2019 during the first half of 2020.

Restructuring Charges (Recoveries), net as of and for the year ended December 31, 2018				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses	\$ 854	\$ 190	\$ —	\$ 1,044
Employee related expenses	2,807	436	1,561	4,804
Total restructuring charges, net	<u>\$ 3,661</u>	<u>\$ 626</u>	<u>\$ 1,561</u>	<u>\$ 5,848</u>
Accrued restructuring charges as of December 31, 2017				\$ 882
Total year to date charges, net (shown above)				5,848
Charges paid / settled, net				(5,856)
Accrued restructuring charges as of December 31, 2018				<u>\$ 874</u>

Restructuring Charges (Recoveries), net as of and for the year ended December 31, 2017				
	Energy	Aerospace & Defense	Corporate	Total
Facility related expenses	\$ 85	\$ 443	\$ —	\$ 528
Employee related expenses	(31)	2,062	—	2,031
Total restructuring charges, net	<u>\$ 54</u>	<u>\$ 2,505</u>	<u>\$ —</u>	<u>\$ 2,559</u>
Accrued restructuring charges as of December 31, 2016				\$ 1,309
Total year to date charges, net (shown above)				2,559
Charges paid / settled, net				(2,986)
Accrued restructuring charges as of December 31, 2017				<u>\$ 882</u>

## Restructuring Programs Summary

As specific restructuring programs are announced, the amounts associated with that particular action may be recorded in periods other than when announced to comply with the applicable accounting rules. For example, total cost associated with 2017 Actions (as discussed below) were recorded in 2017 and 2018. The amounts shown below reflect the total cost for that restructuring program.

During 2019, 2018, 2017, and 2016 we initiated certain restructuring activities, under which we continued to simplify our business ("2019 Actions", "2018 Actions", "2017 Actions", "2016 Actions", respectively). Under these restructurings, we reduced expenses, primarily through reductions in force and closing a number of smaller facilities. Charges associated with the 2019 Actions and the 2018 Actions were recorded during their respective years. Charges associated with the 2017 Actions and 2016 Actions were finalized in 2017.

2019 Restructuring Charges (Recoveries), net as of December 31, 2019				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses - incurred to date	\$ (1,785)	\$ 35	\$ 327	\$ (1,423)
Employee related expenses - incurred to date	604	560	5,445	6,609
Total restructuring related special charges - incurred to date	\$ (1,181)	\$ 595	\$ 5,772	\$ 5,186

2018 Actions Restructuring Charges, net as of December 31, 2018				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses - incurred to date	\$ 1,964	\$ —	\$ —	\$ 1,964
Employee related expenses - incurred to date	1,552	382	1,536	3,470
Total restructuring related special charges - incurred to date	\$ 3,516	\$ 382	\$ 1,536	\$ 5,434

2017 Actions Restructuring Charges (Recoveries), net as of December 31, 2018				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses - incurred to date	\$ —	\$ 366	\$ —	\$ 366
Employee related expenses - incurred to date	222	1,892	—	2,114
Total restructuring related special charges - incurred to date	\$ 222	\$ 2,258	\$ —	\$ 2,480

The 2017 Actions were finalized during 2017. There are no remaining cash payments for these actions.

2016 Actions Restructuring Charges (Recoveries), net as of December 31, 2018				
	Energy	Aerospace & Defense	Industrial	Total
Facility related expenses - incurred to date	\$ (92)	\$ 94	\$ —	\$ 2
Employee related expenses - incurred to date	1,080	1,181	—	2,261
Total restructuring related special charges - incurred to date	\$ 988	\$ 1,275	\$ —	\$ 2,263

## (7) Leases

We lease certain office spaces, warehouses, vehicles and equipment. Leases with an initial term of 12-months or less have not been capitalized on the balance sheet. We recognize lease expense associated with these short-term leases on a straight-line basis over the lease term. For lease agreements entered into after the adoption of ASC Topic 842, we combine lease and non-lease fixed components for real estate, vehicles and equipment leases. We do not combine lease and non-lease components for information technology leases. Variable lease costs are not included within the measurement of the lease liability as they are

entirely variable or the difference between the portion captured within the lease liability and the actual cost will be expensed as incurred. Variable costs are contractually obligated and relate primarily to common area maintenance and taxes, which are not material to the financial statements.

We elected the package of practical expedients permitted under the transition guidance, which allowed us to carry forward the historical lease classification, not reassess if existing contracts are or contain leases, and not reassess indirect costs for existing leases.

We have elected not to recast the comparable periods and rather used the effective adoption date of the standard as the date of initial application.

Leases which contain a renewal option to extend an existing lease term, or a termination option to end a lease early are exercisable at our sole discretion. We evaluate such leases to determine if we are reasonably certain to exercise the option. The depreciable life of assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise.

Our lease agreements do not contain any material residual value guarantees.

In determining the present value of lease payments, we use the implicit borrowing rate in the lease, if available. In cases where a lease does not provide an implicit borrowing rate, we use the incremental borrowing rate based on available information at the commencement date. As of December 31, 2019, none of our existing leases provided an implicit borrowing rate. We give consideration to our debt issuances as well as publicly available data for instruments with similar characteristics when calculating our incremental borrowing rates. Additionally, we perform an entity-level financial assessment along with risk assessment by country or jurisdiction in the determination of our incremental borrowing rate. We update our financial and risk assessments periodically. We reassess lease classification and / or remeasure the lease liability in the event of the following: changes in assessment of renewal, termination or purchase option based on triggering events within our control, change in amounts probable of being owed under a residual guarantee, or contingency resolution.

The consolidated balance sheet impact at December 31, 2019 is as follows (in thousands):

<b>Assets</b>	<b>Operating</b>	<b>Finance</b>
Gross ROU Assets (1)	\$ 21,116	\$ 3,527
Less: Accumulated Amortization	(3,492)	(338)
Net ROU Assets	<u>\$ 17,624</u>	<u>\$ 3,189</u>
<b>Liabilities</b>	<b>Operating</b>	<b>Finance</b>
Current (2)	\$ 3,042	\$ 504
Non-current (3)	14,317	2,744
Total Lease Liabilities	<u>\$ 17,359</u>	<u>\$ 3,248</u>

(1) Operating and finance ROU assets are included within other assets on the balance sheet.

(2) The current portion of operating and finance lease liabilities are recorded within accrued expenses and other current liabilities on the balance sheet.

(3) The non-current portion of operating and finance lease liabilities are recorded within other non-current liabilities on the balance sheet.

The components of lease costs are as follows (in thousands):

<b><u>Lease Costs</u></b>	<b>Twelve Months Ended December 31, 2019</b>
Operating lease cost (1)	\$ 5,071
Finance lease cost	
Amortization of leased assets (2)	251
Interest on lease liabilities (3)	40
Total finance lease costs	291
Total lease cost	\$ 5,362

(1) Operating lease costs are recorded within selling, general and administrative expenses or cost of revenue within the consolidated statements of (loss) income depending upon the nature of the underlying lease.

(2) Finance lease amortization costs are recorded in selling, general and administrative expenses within the consolidated statements of (loss) income.

(3) Finance lease interest costs are recorded in interest expense, net within the consolidated statements of (loss) income.

Short-term lease expense and variable lease cost for the twelve months ended December 31, 2019 were not significant.

The estimated future minimum lease payments only include obligations for which we are reasonably certain to exercise our renewal option. Such future payments are as follows (in thousands):

<b><u>Maturity of Lease Liabilities</u></b>	<b>Operating</b>	<b>Finance</b>	<b>Total</b>
2020	\$ 3,994	\$ 526	\$ 4,520
2021	3,338	526	3,864
2022	2,994	515	3,509
2023	2,272	515	2,787
2024	1,761	499	2,260
After 2024	6,834	942	7,776
Less: Interest	(3,834)	(275)	(4,109)
Present value of lease liabilities	\$ 17,359	\$ 3,248	\$ 20,607

The weighted average remaining lease term and discount rates are as follows:

<b><u>Lease Term and Discount Rate</u></b>	<b>December 31, 2019</b>
Weighted average remaining lease term (years)	
Operating leases	6.7
Finance leases	6.8
Weighted average discount rate (percentage)	
Operating leases	4.6%
Finance leases	2.0%

Supplemental cash flow information related to leases are as follows (in thousands):

	Twelve Months Ended December 31, 2019	
<b><u>Other Information</u></b>		
<b>Operating Activities</b>		
Noncash lease expense on operating ROU assets	\$	(17,625)
Amortization expense on finance ROU assets		251
Change in total operating lease liabilities		17,359
Principal paid on operating lease liabilities		(4,301)
<b>Total Operating Activities</b>	\$	(4,316)
<b>Financing Activities</b>		
Principal paid on finance lease liabilities	\$	(281)
<b>Supplemental</b>		
Interest Paid on finance lease liabilities	\$	40

As of December 31, 2019, the Company has not entered into any lease agreements with related parties.

## (8) Inventories

Inventories consisted of the following (in thousands):

	December 31,	
	2019	2018
Raw materials	\$ 65,315	\$ 66,391
Work in process	53,891	58,911
Finished goods	18,103	18,380
Inventories	<u>\$ 137,309</u>	<u>\$ 143,682</u>

We regularly review inventory quantities on hand and record a provision to write-down excess and obsolete inventory to its estimated net realizable value, if less than cost, based primarily on our estimated forecast of product demand. Once our inventory value is written-down a new cost basis has been established. For 2019, 2018 and 2017, our charges for acquisition inventory step-up amortization, excess and obsolete inventory and net realizable value reserves totaled \$0.4 million, \$7.7 million and \$7.2 million, respectively.

## (9) Property, Plant and Equipment

Property, plant and equipment consisted of the following (in thousands):

	December 31,	
	2019	2018
Land	\$ 31,136	\$ 32,189
Buildings and improvements	82,149	82,728
Manufacturing machinery and equipment	126,942	146,022
Computer equipment and software	35,536	34,180
Furniture and fixtures	11,980	22,928
Vehicles	584	223
Construction in progress	12,597	17,647
Property, plant and equipment, at cost	<u>300,924</u>	<u>335,917</u>
Less: Accumulated depreciation	<u>(128,745)</u>	<u>(146,245)</u>
Property, plant and equipment, at cost, net	<u>\$ 172,179</u>	<u>\$ 189,672</u>



Depreciation expense for the years ended December 31, 2019, 2018, and 2017 was \$22.0 million, \$26.2 million, and \$12.4 million, respectively. For the years ended December 31, 2019, 2018, and 2017, the depreciation expense included \$1.2 million, \$1.6 million, and \$1.5 million, respectively, related to assets classified as held for sale on our consolidated balance sheets.

Property, plant and equipment, net, at December 31, 2019 excludes \$6.4 million related to I&S held for sale assets.

The Company recorded additions to property, plant and equipment of \$1.2 million and \$1.4 million in the years ended December 31, 2019 and December 31, 2018, respectively, for which cash payments had not yet been made.

## (10) Goodwill and Other Intangible Assets

The following table shows goodwill by segment as of December 31, 2019 and 2018 (in thousands):

	Energy	Aerospace & Defense	Industrial	Consolidated Total
Goodwill as of December 31, 2018	\$ 96,272	\$ 57,418	\$ 296,915	\$ 450,605
Business divestiture	—	—	(85,474)	(85,474)
Reclassification of Instrumentation & Sampling to assets held for sale	(91,492)	—	—	(91,492)
Currency translation adjustments	(4,780)	(33)	3,067	(1,746)
Goodwill as of December 31, 2019	<u>\$ —</u>	<u>\$ 57,385</u>	<u>\$ 214,508</u>	<u>\$ 271,893</u>

	Energy	Aerospace & Defense	Industrial	Consolidated Total
Goodwill as of December 31, 2017	\$ 145,458	\$ 62,548	\$ 289,156	\$ 497,162
Held for sale	(40,372)	—	—	(40,372)
Measurement Period adjustments related to acquisitions	(4,742)	(5,046)	17,984	8,196
Business divestiture	—	—	(3,394)	(3,394)
Currency translation adjustments	(4,072)	(84)	(6,831)	(10,987)
Goodwill as of December 31, 2018	<u>\$ 96,272</u>	<u>\$ 57,418</u>	<u>\$ 296,915</u>	<u>\$ 450,605</u>

During the twelve months ended December 31, 2019, the Company recorded goodwill impairments of \$8.6 million related to the discontinued businesses. These amounts are excluded from the tables above which represents goodwill activity for continuing operations. No goodwill impairments were recorded related to continuing operations during the twelve months ended December 31, 2019 or 2018. Historical accumulated goodwill impairments were immaterial.

The tables below present gross intangible assets and the related accumulated amortization (in thousands):

	December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Patents	\$ 5,368	\$ (5,368)	\$ —
Customer relationships	300,284	(83,411)	216,873
Order backlog	22,789	(20,517)	2,272
Acquired technology	134,731	(43,890)	90,841
Other	341	(341)	—
Total Amortized Assets	\$ 463,513	\$ (153,527)	\$ 309,986
Non-amortized intangibles (primarily trademarks and trade names)	\$ 75,556	\$ —	\$ 75,556
Net Carrying Value of Intangible assets			<u>\$ 385,542</u>

	December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Patents	\$ 5,399	\$ (5,399)	\$ —
Customer relationships	305,866	(56,133)	249,733
Order backlog	23,354	(18,746)	4,608
Acquired technology	133,247	(23,883)	109,364
Other	4,599	(4,195)	404
Total Amortized Assets	\$ 472,465	\$ (108,356)	\$ 364,109
Non-amortized intangibles (primarily trademarks and trade names)	\$ 76,172	\$ —	\$ 76,172
Net Carrying Value of Intangible assets			<u>\$ 440,281</u>

The table below presents estimated future amortization expense for intangible assets recorded as of December 31, 2019 (in thousands):

	2020	2021	2022	2023	2024	After 2025
Estimated amortization expense	<u>\$ 43,251</u>	<u>\$ 41,314</u>	<u>\$ 36,310</u>	<u>\$ 31,839</u>	<u>\$ 27,982</u>	<u>\$ 129,290</u>

The annual impairment testing of our non-amortized intangible assets was completed as of October 27, 2019 and consisted of a comparison of the fair value of the intangible assets with carrying amounts. No impairments of our non-amortized intangible assets were recorded for the year ended December 31, 2019.

## (11) Income Taxes

The significant components of our deferred income tax liabilities and assets were as follows (in thousands):

	December 31,	
	2019	2018
<b>Deferred income tax (liabilities):</b>		
Accrued expenses	\$ (971)	\$ —
Bad Debt	(260)	—
Fixed Assets	(14,044)	(6,343)
Intangible Assets	(54,032)	(73,558)
Inventory	(1,121)	—
Other	(697)	151
Pension	(210)	—
Total deferred income tax liabilities	(71,335)	(79,750)
<b>Deferred income tax assets:</b>		
Accrued expenses	5,202	15,153
Bad Debt	2,247	(2,069)
Equity Compensation	3,373	4,760
Intangible Assets	4	—
Inventory	7,439	4,696
Other	11,510	307
Net operating loss and credit carry-forward	23,124	26,298
Pension	32,901	29,400
Interest	9,836	5,067
Total deferred income tax assets	95,636	83,612
Valuation allowance	(14,303)	(17,562)
Deferred income tax asset, net of valuation allowance	81,333	66,050
Deferred income tax (liability)/asset, net	\$ 9,998	\$ (13,700)

The (benefit from) provision for income taxes is based on the following pre-tax income (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Domestic	\$ (45,209)	\$ (71,059)	\$ (4,406)
Foreign	35,117	47,163	8,046
(Loss) income before income taxes	<u>\$ (10,092)</u>	<u>\$ (23,896)</u>	<u>\$ 3,640</u>

The provision for income taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2019	2018	2017
<b>Current provision:</b>			
Federal - U.S.	\$ —	\$ —	\$ (447)
Foreign	17,522	11,583	4,586
State -U.S.	594	235	442
Total current	<u>\$ 18,116</u>	<u>\$ 11,818</u>	<u>\$ 4,581</u>
<b>Deferred provision (benefit):</b>			
Federal - U.S.	\$ 8,414	\$ 621	\$ (6,764)
Foreign	(11,768)	(1,323)	(4,640)
State -U.S.	(86)	(1,665)	(388)
Total (benefit) deferred	<u>(3,440)</u>	<u>(2,367)</u>	<u>(11,792)</u>
Total (benefit) provision for income taxes	<u>\$ 14,676</u>	<u>\$ 9,451</u>	<u>\$ (7,211)</u>

Actual income taxes reported from operations were different from those that would have been computed by applying the federal statutory tax rate to income before income taxes. The expense for income taxes differed from the U.S. statutory rate due to the following:

	Year Ended December 31,		
	2019	2018	2017
Expected federal income tax rate	21.0 %	21.0 %	35.0 %
State income taxes, net of federal tax benefit	15.5	3.8	(5.7)
US permanent differences	(1.6)	(1.0)	22.7
Foreign tax rate differential and credits	(26.0)	(7.6)	(66.4)
Unbenefited foreign losses	(0.5)	(5.5)	—
Tax reserve	(0.3)	1.3	(27.0)
Rate Change	5.9	—	(13.9)
GILTI	(3.9)	(20.7)	—
Intercompany financing	30.4	12.7	(17.8)
Foreign tax credit writeoff	—	(45.6)	—
Foreign-derived intangible income ("FDII")	10.7	0.1	—
Prior period adjustment	44.1	4.3	(0.6)
Dispositions	(227.0)	—	4.7
Other, net	(16.0)	(0.8)	3.9
Equity compensation	(10.8)	(4.2)	(2.7)
Release of contingent consideration	—	—	(113.9)
Research and development	13.1	2.7	(14.0)
Effective tax rate	<u>(145.4)%</u>	<u>(39.5)%</u>	<u>(195.7)%</u>

As of December 31, 2019 and 2018, the Company maintained a total valuation allowance of \$14.3 million and \$17.6 million, respectively, which relates to foreign, federal, and state deferred tax assets as of December 31, 2019 and foreign, federal and

state deferred tax assets as December 31, 2018. The valuation allowance is based on estimates of taxable income in each of the jurisdictions in which we operate and the period over which our deferred tax assets will be recoverable. The movement in the valuation allowance is primarily due to reclassification of balances to assets held for sale.

The following table provides a summary of the changes in the deferred tax valuation allowance for the years ended December 31, 2019, 2018, and 2017 (in thousands):

	December 31,		
	2019	2018	2017
Deferred tax valuation allowance at January 1	\$ 17,562	\$ 22,067	\$ 3,028
Additions	—	10,960	712
Acquired	150	(15,431)	18,494
Deductions	(2,838)	(34)	(167)
Reclass to assets available for sale	(571)	—	—
Deferred tax valuation allowance at December 31	<u>\$ 14,303</u>	<u>\$ 17,562</u>	<u>\$ 22,067</u>

The Company files income tax returns in the U.S. federal, state and local jurisdictions and in foreign jurisdictions. The Company is no longer subject to examination by the Internal Revenue Service ("IRS") for years prior to 2016 and is no longer subject to examination by the tax authorities in foreign and state jurisdictions prior to 2006, with the exception of net operating loss carryforwards. The Company is currently under examination for income tax filings in various foreign jurisdictions.

As of December 31, 2019, the Company had foreign tax credits of \$11.3 million, foreign net operating losses of \$9.4 million, state net operating losses of \$68.8 million and state tax credits of \$2.0 million. As of December 31, 2018, the Company had foreign tax credits of \$16.8 million, foreign net operating losses of \$37.3 million, federal net operating losses of \$3.0 million, state net operating losses of \$70.0 million and state tax credits of \$2.4 million. The foreign tax credits, if not utilized, will expire in 2026. A portion of the foreign net operating losses (\$4.5 million) expire at various dates through 2026; the remainder have an unlimited carryforward period. The federal net operating losses have an unlimited carryforward period. The state net operating losses and state tax credits, if not utilized, will expire at various dates through 2036.

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act includes significant changes to the U.S. corporate income tax system including: a federal corporate rate reduction from 35% to 21%; limitations on the deductibility of interest expense and executive compensation; creation of the base erosion anti-abuse tax ("BEAT"), a new minimum tax; GILTI; and the transition of U.S. international taxation from a worldwide tax system to a modified territorial tax system. The change to a modified territorial tax system resulted in a one-time U.S. tax liability on those earnings which have not previously been repatriated to the U.S. (the "Transition Tax"), with future distributions not subject to U.S. federal income tax when repatriated. A majority of the provisions in the Tax Act were effective January 1, 2018 and have been reflected in our financial statements. With respect to GILTI, the Company has adopted a policy to account for this provision as a period cost.

In response to the Tax Act, the SEC staff issued guidance on accounting for the tax effects of the Tax Act (ASU 2018-05). The guidance provided a one-year measurement period for companies to complete the accounting. The Company has adopted the impact of ASU 2018-05 in our financial statements.

In connection with the impact of the Tax Act, we recorded a \$0.5 million net tax benefit for the period ended December 31, 2017. This benefit consists of zero net expense for the Transition Tax liability, and \$0.5 million benefit from the remeasurement of our deferred tax assets/liabilities due to the corporate rate reduction. The Company did not owe the one-time Transition Tax liability, based on foreign tax pools that are in excess of U.S. tax rates. The impact of the Tax Act resulted in a valuation allowance on a portion of our U.S. foreign tax credit carryforwards (deferred tax asset), in the amount of \$10.9 million expense which was recorded in 2018.

As of December 31, 2019, the liability for uncertain income tax positions was approximately \$0.6 million. Approximately \$0.6 million as of December 31, 2019 represents the amount that if recognized would affect the Company's effective income tax rate in future periods. The Company does not expect the unrecognized tax benefits to change over the next 12 months. The table below does not include interest and penalties of \$0.0 million and \$0.4 million as of December 31, 2019 and 2018, respectively.

The following is a reconciliation of the Company's liability for uncertain income tax positions for the years ended December 31, 2019, 2018 and 2017 (in thousands):

	December 31,		
	2019	2018	2017
Balance beginning January 1	\$ 593	\$ 3,014	\$ 3,000
Additions/(reductions) for tax positions of prior years	—	(460)	(7)
Additions/(reductions) based on tax positions related to current year	37	(340)	(65)
Acquired uncertain tax position balance	—	(512)	1,221
Settlements	—	(1,103)	(338)
Lapse of statute of limitations	—	(6)	(978)
Currency movement	—	—	181
Balance ending December 31	<u>\$ 630</u>	<u>\$ 593</u>	<u>\$ 3,014</u>

Undistributed earnings of our foreign subsidiaries amounted to \$196.4 million and \$259.9 million at December 31, 2019 and December 31, 2018, respectively. The undistributed earnings of our foreign subsidiaries are considered to be indefinitely reinvested and accordingly, no provision for U.S. federal and state income taxes has been recorded. Determination of the amount of unrecognized deferred tax liability on these undistributed earnings is not practicable because of the complexity of laws and regulations, the varying tax treatment of alternative repatriation scenarios, and the variation due to multiple potential assumptions relating to the timing of any future repatriation.

## (12) Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31,	
	2019	2018
Customer deposits and obligations	\$ 24,006	\$ 25,251
Commissions payable and sales incentive	2,472	3,517
Penalty accruals	1,847	1,957
Warranty reserve	1,642	2,980
Professional fees	2,318	2,775
Taxes other than income tax	3,551	2,913
Other Contract Liabilities	9,153	14,646
Income tax payable	5,521	3,529
Other	43,659	34,928
Total accrued expenses and other current liabilities	<u>\$ 94,169</u>	<u>\$ 92,496</u>

### (13) Financing Arrangements

Long-term debt consisted of the following (in thousands):

	December 31,	
	2019	2018
Term Loan at interest rates ranging from 5.24%-6.0% in 2019 and 4.93%-5.92% in 2018	\$ 653,850	\$ 777,150
Line of Credit at interest rates ranging from 5.65%-8.00% in 2019 and 4.93%-8.00% in 2018	—	29,900
Total Principal Debt Outstanding	653,850	807,050
Less: Term Loan Debt Issuance Costs	17,553	21,013
Less: Current Portion	—	7,850
Total Long-Term Debt, net	\$ 636,297	\$ 778,187

	2020	2021	2022	2023	2024	Thereafter
Minimum principal payments	\$ —	\$ —	\$ —	\$ —	\$ 653,850	\$ —

On December 11, 2017, we entered into a secured credit agreement (the "Credit Agreement"), which provides for a \$150.0 million revolving line of credit with a five year maturity and a \$785.0 million term loan with a seven year maturity which was funded in full at closing of the FH acquisition. The Credit Agreement replaced and terminated the Company's prior credit agreement, dated as of May 11, 2017 (the "Prior Credit Agreement"). The Prior Credit Agreement, under which we had borrowings of \$273.5 million outstanding, was terminated on December 11, 2017 and replaced by the Credit Agreement.

The term loan requires quarterly principal payments of 0.25% of initial aggregate principal amount beginning March 29, 2018 with the balance due at maturity. During 2019, the Company paid down its term loan by \$123.3 million primarily with divestiture-related proceeds thereby satisfying all future amortization obligations (previously \$2.0 million per quarter) until 2024 under the Credit Agreement. Additional loans of up to \$150.0 million (plus the amount of certain voluntary prepayments) and an unlimited amount subject to compliance with a first lien net leverage ratio of 6.50 to 1.00 may be made available under the Credit Agreement upon request of the Company subject to specified terms and conditions. The Company may repay any borrowings under the Credit Agreement at any time, subject to certain limited and customary restrictions stated in the Credit Agreement; provided, however, that if the Company prepays all or any portion of the term loan in connection with a repricing transaction on or prior to the 6-month anniversary of the origination date, the Company must pay a prepayment premium of 1.0% of the aggregate principal amount of the term loan so prepaid.

The Company incurred \$23.9 million of debt issuance costs associated with the term loan which have been recorded as a debt discount within long-term debt, and \$5.2 million of fees associated with the revolver which have been recorded in other assets.

As of December 31, 2019, we had borrowings of \$653.9 million outstanding under the Credit Agreement and \$34.3 million in letters of credit issued under the Credit Agreement. The Company recorded non-cash interest expense of \$3.9 million, \$3.9 million, and \$0.8 million for December 31, 2019, 2018, and 2017, respectively, related to the amortization of its deferred financing costs described above. The Credit Agreement revolving line of credit facility matures on December 11, 2022 whereas the term loan facility matures on December 11, 2024.

The Company's outstanding debt balances are characterized as Level 2 financial instruments. As of December 31, 2019, the fair value of our gross term loan debt (before netting debt issuance costs) was \$655.8 million, or \$1.9 million above our carrying cost of \$653.9 million.

The outstanding principal amounts bear interest at a fluctuating rate (generally the 30 day LIBOR rate) per annum plus an applicable margin of 3.50% with respect to LIBOR loans and 2.50% with respect to base rate loans. The Company entered into a hedging agreement to mitigate the inherent rate risk associated with the variable rate debt, which is accounted for as cash flow hedge. Any gain or loss is recorded within accumulated other comprehensive income.

Effective April 12, 2018, the Company entered into an interest rate swap pursuant to an International Swaps and Derivatives Association ("ISDA") Master Agreement with Citizens Bank, National Association ("interest rate swap"). The four-year interest rate swap has a fixed notional value of \$400.0 million with a 1% LIBOR floor and a maturity date of April 12, 2022. The fixed rate of interest paid by the Company is comprised of our current credit spread of 350 basis points plus 2.6475% for a total interest rate of 6.1475%. The ISDA Master Agreement, together with its related schedules, contain customary

representations, warranties and covenants. This hedging agreement was entered into to mitigate the interest rate risk inherent in the Company's variable rate debt and is not for speculative trading purposes. The Company has designated the interest rate swap as a qualifying hedging instrument and is treating it as a cash flow hedge for accounting purposes pursuant to ASC Topic 815, *Derivatives and Hedging*.

Effective July 12, 2019, the Company entered into a cross-currency swap agreement to hedge its net investment in non-U.S. subsidiaries against future volatility in exchange rates between the U.S. dollar and the Euro. The cross-currency swap agreement is pursuant to an ISDA Master Agreement with Deutsche Bank AG. The three-year cross-currency swap has a fixed notional value of \$100.0 million at an annual rate of 2.4065% and a maturity date of July 12, 2022. At inception, the cross-currency swap was designated as a net investment hedge. The swap was entered into to hedge a portion of CIRCOR International Inc.'s net investment in certain of its Euro functional currency-denominated subsidiaries against the variability of exchange rate translation impacts between the US dollar and the Euro. The net investment hedge was deemed effective as of year end.

The aggregate net fair value of the interest rate swap and cross currency swap as of December 31, 2019 are summarized in the table below:

	Significant Other Observable Inputs	
	Level 2	
Derivative asset	\$	476
Derivative liabilities	\$	(9,168)

These balances are recorded in other long-term liabilities of \$(5.1) million, accrued expenses and other current liabilities of \$(4.0) million, and other current assets of \$0.5 million on our consolidated balance sheet as of December 31, 2019.

The amount of gain (loss) recognized in other comprehensive (loss) income ("OCI") and reclassified from accumulated other comprehensive (loss) income ("AOCI") to income are summarized below:

	Twelve Months Ended	
	December 31, 2019	December 31, 2018
Amount of gain (loss) recognized in OCI	\$ (8,580)	\$ (2,000)
Amount of gain (loss) reclassified from AOCI into income	\$ (1,583)	\$ (1,600)

The realized loss was reclassified from OCI to interest expense as interest expense was accrued on the swap during the twelve months ended December 31, 2019 and December 31, 2018. At December 31, 2019, amounts expected to be reclassified from AOCI into interest expense in the next 12 months is a loss of \$4.0 million.

The Company recorded a long term deferred tax asset of \$2.1 million and \$0.5 million on our balance sheet as of December 31, 2019 and December 31, 2018, respectively.

Interest expense related to the portion of the Company's term loan subject to the interest-rate swap agreement was \$24.9 million for the twelve months ended December 31, 2019.

#### (14) Share-Based Compensation

We have three share-based compensation plans as of December 31, 2019: (1) the 2019 Stock Option and Incentive Plan (the "2019 Plan"), (2) the 2014 Stock Option and Incentive Plan (the "2014 Plan"), and (3) the Amended and Restated 1999 Stock Option and Incentive Plan (the "1999 Plan"). The 2019 Plan was adopted by our Board of Directors (subject to shareholder approval) on February 20, 2019 and approved by our shareholders at the Company's annual meeting on May 9, 2019. As of May 9, 2019, no new awards will be granted under either the 2014 Plan or the 1999 Plan. As a result, any shares subject to outstanding awards under the 2014 Plan and the 1999 Plan that expire, are canceled or otherwise terminate, or are withheld to satisfy tax withholding obligations will not be available for award grant purposes under the 2019 Plan. All plans permit the grant of the following types of awards to our officers, other employees and non-employee directors: incentive stock options, nonqualified stock options, deferred stock awards, restricted stock awards, restricted stock unit ("RSU") awards, unrestricted stock awards, performance share awards, cash based awards, stock appreciation rights ("SARs") and dividend equivalent rights. The 2019 Plan provides for the issuance of up to 1,000,000 shares of common stock (subject to adjustment for stock splits and



similar events). Under the 2019 Plan, shares issued for all awards count against the aggregate share limit as 1.0 share for every share actually issued. All stock options and RSUs granted under the 1999 Plan are either 100% vested or have been terminated. RSUs granted under the 2014 Plan and the 2019 Plan generally vest within three years. RSUs will be settled in shares of our common stock. As of December 31, 2019, there were 952,825 shares available for grant under the 2019 Plan.

As of December 31, 2019, there were 712,500 stock options (including the CEO stock option award noted below) and 381,561 RSUs outstanding. As of December 31, 2019, there were 11,135 RSUs outstanding that contain rights to nonforfeitable dividend equivalents and are considered participating securities that are included in our computation of basic and fully diluted earnings per share. There is no difference in the earnings per share amounts between the two class method and the treasury stock method, which is why we continue to use the treasury stock method.

We measure the cost of all share-based payments, including stock options, at fair value on the grant date and recognize this cost in the Consolidated Statement of Operations, net of actual forfeitures. Compensation expense related to our share-based plans for the years ended December 31, 2019, 2018 and 2017 was \$5.4 million, \$5.0 million and \$3.8 million respectively. Expenses related to non-share based compensation are generally recorded as selling, general and administrative expense. As of December 31, 2019, there was \$8.1 million of total unrecognized compensation cost related to our outstanding share-based compensation arrangements. That cost is expected to be recognized over a weighted average period of 1.8 years. This compares to \$7.6 million for 2018, and \$6.8 million for 2017, respectively.

#### *Stock Options*

During the year ended December 31, 2019, we granted stock option awards for the purchase of 153,726 shares of our common stock, compared with 127,704 in 2018 and 142,428 in 2017.

On April 9, 2013, we granted a stock option to purchase 200,000 shares of common stock to our President and Chief Executive Officer at an exercise price of \$41.17 per share. This award included a service period and a market performance vesting condition. In 2014, certain of these targets were achieved and 150,000 shares vested and remain exercisable. The remaining 50,000 shares were canceled in 2018 due to lack of performance achievement.

On March 5, 2014, we granted a stock option to purchase 100,000 shares of common stock to our President and Chief Executive Officer at an exercise price of \$70.42 per share. This option award includes a service period and a market performance vesting conditions which were not met and all 100,000 shares were canceled in the year ended December 31, 2018.

The Company uses the Black Scholes pricing model to value the option awards. The average fair value of stock options granted during the years ended December 31, 2019, 2018, and 2017 of \$11.84, \$14.68, and \$19.36, respectively, was estimated using the following weighted-average assumptions:

	Year Ended December 31,		
	2019	2018	2017
Risk-free interest rate	2.6%	2.5%	1.7%
Expected life (years)	4.3	4.3	4.4
Expected stock volatility	38.1%	37.2%	35.1%
Expected dividend yield	—%	—%	0.2%

#### *Restricted Stock Units*

We account for RSU awards by expensing the weighted average fair value to selling, general and administrative expenses ratably over vesting periods generally ranging up to three years. During the years ended December 31, 2019 and December 31, 2018, we granted 205,291 and 167,480 RSUs, respectively, with approximate fair values of \$32.92 and \$42.87 per RSU award, respectively. During 2019 and 2018, the Company granted performance-based RSUs as part of the overall mix of RSU awards. In 2019, these performance-based RSUs included metrics for achieving adjusted operating margin and adjusted free cash flow with target payouts of 0% to 200%. In 2018 and prior years, these performance-based RSUs included metrics for achieving return on invested capital and adjusted operating margin with the same target payout ranges. Of the 205,291 RSUs granted during 2019, 67,362 are performance-based RSU awards. This compares to 48,080 performance-based RSU awards granted in 2018.

The CIRCOR Management Stock Purchase Plan ("MSPP"), which is a component of all three of our share-based compensation plans, provides that eligible employees may elect to receive RSUs in lieu of all or a portion of their pre-tax annual incentive bonus and, in some cases, make after-tax contributions in exchange for RSUs ("RSU MSPs"). Each RSU MSP represents a right to receive one share of our common stock after a three-year vesting period. RSU MSPs are granted at a discount of 33% from the fair market value of the shares of common stock on the date of grant. This discount is amortized as compensation expense, to selling, general and administrative expenses, over a four-year period. RSU MSPs totaling 56,379 and 34,937 with per unit discount amounts representing fair values of \$11.10 and \$14.06, respectively, were granted under the MSPP during the years ended December 31, 2019 and December 31, 2018, respectively.

A summary of the status of all stock options and RSU awards granted to employees and non-employee directors as of December 31, 2019 and changes during the year are presented in the table below:

	December 31, 2019					
	Stock Options		RSU Awards		RSU MSPs	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Options and awards outstanding at beginning of period	742,658	\$ 50.26	226,683	\$ 45.66	72,113	\$ 32.25
Granted	153,726	\$ 33.63	205,291	\$ 32.92	56,379	\$ 22.53
Exercised	(6,516)	\$ 38.89	(59,450)	\$ 44.06	(16,866)	\$ 28.81
Forfeited	(108,013)	\$ 68.79	(97,565)	\$ 39.99	(5,024)	\$ 26.34
Expired	(69,355)	\$ 52.35	—	—	—	—
Options and awards outstanding at end of period	712,500	\$ 43.76	274,959	\$ 38.51	106,602	\$ 28.06
Options and awards exercisable at end of period	457,778	\$ 46.12	5,689	\$ 51.71	5,446	\$ 31.90

The weighted average contractual term for stock options outstanding and exercisable as of December 31, 2019 was 4.1 years and 3.2 years, respectively. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2019, 2018 and 2017 was \$0.0 million, \$0.2 million and \$0.4 million, respectively. The aggregate fair value of stock-options vested during the years ended December 31, 2019, 2018 and 2017 was \$1.8 million, \$2.1 million and \$1.6 million, respectively. The aggregate intrinsic value of stock options outstanding and exercisable as of December 31, 2019 was \$4.0 million and \$1.9 million, respectively. As of December 31, 2019, there was \$2.0 million of total unrecognized compensation cost related to stock options expected to be recognized over a weighted average period of 1.8 years.

The aggregate intrinsic value of RSU awards settled during the 12 months ended December 31, 2019, 2018 and 2017 was \$2.0 million, \$1.2 million, and \$1.7 million, respectively. The aggregate fair value of RSU awards vested during the 12 months ended December 31, 2019, 2018 and 2017 was \$2.6 million, \$1.5 million and \$1.4 million, respectively. The aggregate intrinsic value of RSU awards outstanding and exercisable as of December 31, 2019 was \$12.7 million and \$0.3 million, respectively. As of December 31, 2019, there was \$5.6 million of total unrecognized compensation cost related to RSU awards that is expected to be recognized over a weighted average period of 1.8 years.

There were 5,446 RSU MSPs exercisable as of December 31, 2019 compared to 7,972 as of December 31, 2018, and none as of December 31, 2017. The aggregate intrinsic value of RSU MSPs settled during the years ended December 31, 2019, 2018, and 2017 was \$0.0 million, \$0.4 million and \$0.3 million, respectively. The aggregate fair value of RSU MSPs vested during the years ended December 31, 2019, 2018, and 2017 was \$0.2 million, \$0.6 million and \$0.5 million, respectively. The aggregate intrinsic value of RSU MSPs outstanding as of December 31, 2019 was \$1.9 million. As of December 31, 2019, there was \$0.6 million of total unrecognized compensation costs related to RSU MSPs that is expected to be recognized over a weighted average period of 1.9 years.

The following table summarizes information about equity awards outstanding at December 31, 2019:

(shares and aggregate intrinsic value in thousands)	Equity Awards Outstanding				Equity Awards Exercisable			
	Awards	Average Share Price *	Aggregate Intrinsic Value	Remaining Term **	Awards	Average Share Price *	Aggregate Intrinsic Value	Remaining Term **
Stock Options	712,500	43.76	\$ 4,042	4.1	457,778	46.12	\$ 1,874	3.2
Restricted Stock Unit Awards	274,959	38.51	\$ 12,714	1.7	5,689	51.71	\$ 263	0.5
RSU MSPs	106,602	28.06	\$ 1,938	1.4	5,446	31.90	\$ 78	0.1

\* Weighted-average exercise price per share for options and weighted- average grant date price for RSUs.

\*\* Weighted-average contractual remaining term in years.

We also grant cash settled stock unit awards to our international employee participants. During 2019 and 2018, the vesting schedule was updated so that cash settled stock unit awards granted vest ratably over a three year period. In 2017 and prior years, these cash settled stock unit awards would typically cliff-vest in three years. All of these awards are settled in cash based on the closing price of our common stock at the time of vesting. As of December 31, 2019, there were 45,681 cash settled stock unit awards outstanding compared with 50,907 cash settled stock unit awards outstanding as of December 31, 2018. During 2019, the aggregate cash used to settle cash settled stock unit awards was \$0.9 million. As of December 31, 2019, the Company had \$0.9 million in accrued expenses classified as current liabilities for cash settled stock unit awards compared with \$0.6 million as of December 31, 2018. In 2019, cash settled stock unit award related compensation costs for the twelve month period ended December 31, 2019 totaled \$1.4 million and was recorded as follows: \$1.1 million in selling, general and administrative expense and \$0.3 million as special charges related to the sale of our EV business. In 2018 and 2017, cash settled stock unit award-related compensation costs totaling \$0.0 million and \$0.2 million, respectively, were recorded as selling, general and administrative expense. The increase in compensation costs in 2019 as compared to 2018 and 2017 is due primarily to a higher ending stock price.

## (15) Concentrations of Risk

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash, cash equivalents, short-term investments and trade receivables. A significant portion of our revenue and receivables are from customers associated with the aerospace, defense, energy and industrial markets. We perform ongoing credit evaluations of our customers and maintain allowances for potential credit losses. For the years ended December 31, 2019, 2018 and 2017, we had no customers that accounted for more than 10% of the Company's consolidated revenues.

## (16) Retirement Plans

### U.S. Contribution Plan

We offer a savings plan to eligible U.S. employees. The plan is intended to qualify under Section 401(k) of the Internal Revenue Code. Substantially all of our U.S. employees are eligible to participate in the 401(k) savings plan. Participating employees may defer a portion of their pre-tax compensation, as defined, but not more than statutory limits. Under this plan, we match a specified percentage of employee contributions, and are able to make a discretionary core contribution, subject to certain limitations. For the first part of 2018, we contributed 50% of the amount contributed by the employee, up to a maximum of 5% of the employee's earnings. Our matching contributions vest at a rate of 20% per year of service, with full vesting after five years of service. Effective August 28, 2018, the Company had a 401(k) benefit update, wherein the Company contributed 100% of the amount contributed by the employee, up to a maximum of 4% of the employee's earnings. Matching contributions under the updated 401(k) benefit plan vest 0% after one year, 50% after two years, and 100% after three years in the matching contribution. Effective January 1, 2020, the Company has suspended the 401(k) match for select plans.

The cost of our 401(k) plan is outlined below (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Cost of 401(k) plan	\$ 3,428	\$ 1,847	\$ 1,978

## Pension & Other Post-Retirement Benefit Obligations

The Company also sponsors various defined benefit plans, and other post-retirement benefits plans, including health and life insurance, for former employees of an acquired business. These plans include significant benefit obligations which are calculated based on actuarial valuations. Key assumptions are made in determining these obligations and related net periodic benefit costs, including discount rates, mortality, and expected long-term return on plan assets.

On December 11, 2017, the Company acquired FH. The acquisition included all of the pension obligations associated with the acquired business outside of the U.S., and a significant portion of the post-retirement obligations associated with the acquired business in the U.S. The Company maintains a qualified noncontributory defined benefit pension plan, a nonqualified, noncontributory defined benefit supplemental pension plan, and other post-retirement benefit plans, including health and life insurance, in the U.S., which are frozen. To date, the supplemental and the other post-retirement benefits plans remain unfunded.

Outside of the U.S., the Company sponsors various funded and unfunded defined benefit plans. The obligations are primarily attributed to partially funded plans in Germany and the U.K.

During fiscal year 2019, we made cash contributions of approximately \$0.8 million to our U.S. plans and \$4.3 million to our foreign plans. In 2020, we expect to make defined benefit plan contributions based on the minimum required funding in accordance with statutory requirements (approximately \$1.1 million in the U.S. and approximately \$4.2 million for our foreign plans). The estimates for plan funding for future periods may change as a result of the uncertainties concerning the return on plan assets, the number of plan participants, and other changes in actuarial assumptions. We anticipate fulfilling these commitments through the generation of cash flow from operations.

The components of net periodic benefit cost for the postretirement plans were as follows (in thousands):

	Pension Benefits			Other Post-retirement Benefits		
	Year Ended December 31,			Year Ended December 31,		
	2019	2018	2017	2019	2018	2017
<b>Components of net periodic benefit cost:</b>						
Service cost	\$ 2,694	\$ 2,993	\$ 181	\$ 2	\$ 1	\$ —
Interest cost	10,061	9,164	2,158	359	336	20
Expected return on assets	(11,979)	(15,418)	(2,994)	—	—	—
Net periodic benefit cost	776	(3,261)	(655)	361	337	20
Net loss (gain) amortization	441	153	735	(32)	—	—
Prior service cost amortization	15	—	—	—	—	—
Total amortization	456	153	735	(32)	—	—
Net periodic benefit cost	\$ 1,232	\$ (3,108)	\$ 80	\$ 329	\$ 337	\$ 20

The weighted average assumptions used in determining the net periodic benefit cost and benefit obligations for the post-retirement plans are shown below:

	Pension Benefits			Other Post-retirement Benefits		
	Year Ended December 31,			Year Ended December 31,		
	2019	2018	2017	2019	2018	2017
<b>Net periodic benefit cost (1):</b>						
Discount rate – U.S.	3.93%	3.27%	3.86%	4.10%	3.48%	3.63%
Discount rate – Foreign	2.00%	1.97%	N/A	N/A	N/A	N/A
Expected return on plan assets - U.S. (2)	6.25%	7.00%	7.25%	N/A	N/A	N/A
Expected return on plan assets - Foreign	3.70%	3.53%	N/A	N/A	N/A	N/A
Rate of compensation increase - Foreign	3.15%	3.11%	N/A	N/A	N/A	N/A
<b>Benefit obligations:</b>						
Discount rate – U.S.	2.83%	3.93%	3.27%	3.05%	4.10%	3.48%
Discount rate – Foreign	1.24%	2.00%	1.97%	N/A	N/A	N/A
Rate of compensation increase - Foreign	3.09%	3.14%	3.11%	N/A	N/A	N/A

(1) 2017 Assumption excludes those that would have been applicable for 21 days of CIRCOR's ownership of FH.

(2) 2017 excludes estimate of return on assets still held in the prior plan which had an expected long-term return on plan assets for the time since acquisition of 6.25% for 2017 for which CIRCOR is entitled to its portion of the return.

The amounts reported for net periodic benefit cost and the respective benefit obligation amounts are dependent upon the actuarial assumptions used. The Company reviews historical trends, future expectations, current market conditions, and external data to determine the assumptions. The actuarial assumptions used to determine the net periodic pension cost are based upon the prior year's assumptions used to determine the benefit obligation.

Effective with fiscal year 2018, the Company changed the method used to estimate the service and interest cost components of the net periodic benefit costs for all of its plans in the U.S., U.K., and Germany. The new method uses the spot yield curve approach to estimate the service and interest costs by applying the specific spot rates along the yield curve used to determine the benefit obligations to relevant projected cash outflows. The Company changed to the new method to provide a more precise measure of interest and service costs by more closely correlating the application of the discrete spot yield curve rates with the projected benefit cash flows. Prior to fiscal year 2018, the service and interest costs were determined using a single weighted-average discount rate used to measure the benefit obligation at the measurement date.

Assumed health care cost trend rates pre-65 trend at December 31, 2019 and 2018 were 6.8% and 7.0%, respectively. The rate to which the cost trend rate is assumed to decline (the ultimate trend rate) for December 31, 2019 and 2018 were 4.5% and 5.0%, respectively, and the years that the rate reaches the ultimate trend rate were 2028 and 2027, respectively. Assumed health care cost trend rates post-65 trend at December 31, 2019 and 2018 were 6.8% and 7.0%, respectively. The rate to which the cost trend rate is assumed to decline (the ultimate trend rate) for December 31, 2019 and 2018 were 4.5% and 5.00%, respectively, and the year that the rate reaches the ultimate trend rate were 2028 and 2027, respectively.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plan. A one-percentage point change in assumed health care cost trend rates would have the following pre-tax effects:

	1% Increase	1% Decrease
Effect on total service and interest cost components for the year ended December 31, 2019	\$ 50	\$ (40)
Effect on post-retirement benefit obligation at December 31, 2019	1,359	(1,102)

In selecting the expected long-term return on assets for the qualified and foreign plans, we considered the average rate of earnings expected on the funds invested or to be invested to provide for the benefits of these plans. We, with input from the plans' professional investment managers and actuaries, also considered the average rate of earnings expected on the funds invested or to be invested to provide plan benefits. This process included determining expected returns for the various asset

classes that comprise the plans' target asset allocation. This basis for selecting the long-term return on assets is consistent with the prior year. Using generally accepted diversification techniques, the plans' assets, in aggregate and at the individual portfolio level, are invested so that the total portfolio risk exposure and risk-adjusted returns best meet the plans' long-term benefit obligations to employees. Plan asset allocations are reviewed periodically and rebalanced to achieve target allocation among the asset categories when necessary. This included considering the pension asset allocation and the expected returns likely to be earned over the life of the plans.

The funded status of the defined benefit post-retirement plans and amounts recognized in the consolidated balance sheets, measured as of December 31, 2019 and December 31, 2018 were as follows (in thousands):

	Pension Benefits		Other Post-retirement Benefits	
	December 31,		December 31,	
	2019	2018	2019	2018
<b>Change in projected benefit obligation:</b>				
Balance at beginning of year	\$ 363,334	\$ 399,638	\$ 10,276	\$ 11,685
Service cost	2,694	2,993	2	1
Interest cost	10,061	9,164	359	336
Amendments	—	341	—	—
Actuarial loss (gain)	37,243	(16,081)	(12)	(1,166)
Exchange rate (gain) / loss	(1,692)	(9,661)	—	—
Benefits paid	(24,533)	(23,060)	(432)	(580)
Settlement payments	(3,451)	—	—	—
Curtailments (1)	(1,477)	—	—	—
Balance at end of year	\$ 382,179	\$ 363,334	\$ 10,193	\$ 10,276
<b>Change in fair value of plan assets:</b>				
Balance at beginning of year	\$ 210,993	\$ 247,583	\$ —	\$ —
Actual return on assets	46,665	(15,183)	—	(580)
Exchange rate (gain) / loss	935	(2,430)	—	—
Benefits paid	(24,533)	(23,060)	(432)	—
Settlement payments	(3,451)	—	—	—
Employer contributions	4,688	4,083	432	580
Fair value of plan assets at end of year (2)	\$ 235,297	\$ 210,993	\$ —	\$ —
<b>Funded status:</b>				
Excess of benefit obligation over the fair value of plan assets	\$ (146,882)	\$ (152,341)	\$ (10,193)	\$ (10,276)
Pension plan accumulated benefit obligation ("ABO")	\$ 382,179	\$ 363,334	N/A	N/A

(1) On December 31, 2019, the Company transitioned its defined benefit plan in Norway to a defined contribution plan.

(2) Refer to table below for further disclosure regarding the fair value of our plan assets.

The fair values of the Company's pension plan assets as of December 31, 2019 and 2018 utilizing the fair value hierarchy were as follows (in thousands):

	December 31, 2019				December 31, 2018			
	Measured at Net Asset Value (1)	Level 1	Level 2	Total	Measured at Net Asset Value (1,2)	Level 1	Level 2	Total
<b>U.S. Plans:</b>								
Cash Equivalents:								
Money Market Funds	\$ 2,284	\$ —	\$ —	\$ 2,284	\$ 3,831	\$ —	\$ —	\$ 3,831
<b>Mutual Funds:</b>								
Bond Funds	—	—	—	—	—	—	—	—
Large Cap Funds	—	—	—	—	—	—	—	—
International Funds	28,036	—	—	28,036	20,295	—	—	20,295
Small Cap Funds	—	—	—	—	—	—	—	—
Blended Funds	—	—	—	—	—	—	—	—
Mid Cap Funds	—	—	—	—	—	—	—	—
<b>Comingled Pools:</b>								
Opportunistic	12,480	—	—	12,480	15,461	—	—	15,461
Investment Grade	62,134	—	—	62,134	51,340	—	—	51,340
Non-U.S. Equity	20,363	—	—	20,363	17,432	—	—	17,432
U.S. Equity	81,209	—	—	81,209	70,059	—	—	70,059
Global Low Volatility	1,396	—	—	1,396	5,400	—	—	5,400
Insurance Contracts	—	—	806	806	—	—	—	—
<b>Foreign Plans:</b>								
Cash	—	42	—	42	—	22	—	22
Equity	10,742	—	—	10,742	8,623	—	—	8,623
Non-U.S. government and corporate bonds	15,504	—	—	15,504	13,569	—	—	13,569
Insurance Contracts	271	—	30	301	240	—	3,542	3,782
Other	—	—	—	—	—	—	368	368
<b>Total Fair Value</b>	<b>\$ 234,419</b>	<b>\$ 42</b>	<b>\$ 836</b>	<b>\$ 235,297</b>	<b>\$ 206,250</b>	<b>\$ 22</b>	<b>\$ 3,910</b>	<b>\$ 210,182</b>

(1) Certain investments that are measured at fair value using NAV have not been classified in the fair value hierarchy. These investments, consisting of common/collective trusts, are valued using the NAV provided by the Trustee. The NAV is based on the underlying investments held by the fund that are traded in an active market, less its liabilities. These investments are able to be redeemed in the near-term.

(2) \$0.8 million of pension plan asset receivable was excluded from the fiscal year 2018 leveling table above as CIRCOR did not yet control the assets.

In fiscal year 2019, the Company reimbursed Colfax \$2.2 million from plan assets related to 2018 pension benefits paid, expenses and lost investment return on those payments.

The following information is presented as of December 31, 2019 and 2018 (in thousands):

	Pension Benefits		Other Post-retirement Benefits	
	2019	2018	2019	2018
<b>Funded status, end of year:</b>				
Fair value of plan assets	\$ 235,297	\$ 210,993	\$ —	\$ —
Projected Benefit obligation	(382,179)	(363,334)	(10,193)	(10,276)
Net pension liability	<u>\$ (146,882)</u>	<u>\$ (152,341)</u>	<u>\$ (10,193)</u>	<u>\$ (10,276)</u>
<b>Post-retirement amounts recognized in the balance sheet consists of:</b>				
Non-current asset	\$ 3,917	\$ 1,776	\$ —	\$ —
Current liability	(3,998)	(3,494)	(669)	(701)
Non-current liability	(146,801)	(150,623)	(9,524)	(9,575)
Total	<u>\$ (146,882)</u>	<u>\$ (152,341)</u>	<u>\$ (10,193)</u>	<u>\$ (10,276)</u>
<b>Amounts recognized in accumulated other comprehensive income consist of:</b>				
Net losses	\$ 30,872	\$ 28,497	\$ (883)	\$ (902)
Prior service cost	322	325	—	—
Total	<u>\$ 31,194</u>	<u>\$ 28,822</u>	<u>\$ (883)</u>	<u>\$ (902)</u>
<b>Estimated future benefit expense to be recognized in other comprehensive income (loss):</b>				
	2020			
Amortization of net losses	\$ 277			
Prior service cost	16			
Total	<u>\$ 293</u>			

As of December 31, 2019, the benefit payments expected to be paid in each of the next five years and the aggregate for the five fiscal years thereafter were as follows (in thousands):

	2020	2021	2022	2023	2024	Thereafter
Pension Benefits - All Plans	\$ 23,055	\$ 22,799	\$ 22,516	\$ 22,238	\$ 21,789	\$ 101,297
Other Post-retirement Benefits	669	652	618	596	569	2,560
Expected benefit payments	<u>\$ 23,724</u>	<u>\$ 23,451</u>	<u>\$ 23,134</u>	<u>\$ 22,834</u>	<u>\$ 22,358</u>	<u>\$ 103,857</u>

## (17) Contingencies, Commitments and Guarantees

### Legal Proceedings

We are subject to various legal proceedings and claims pertaining to matters such as product liability or contract disputes, including issues that may arise under certain customer contracts with aerospace and defense customers. We are also subject to other proceedings and governmental inquiries, inspections, audits or investigations pertaining to issues such as tax matters, patents and trademarks, pricing, business practices, governmental regulations, employment and other matters. Although the results of litigation and claims cannot be predicted with certainty, we believe that the ultimate disposition of these matters, to the extent not previously provided for, will not have a material adverse effect, individually or in the aggregate, on our business, financial condition, results of operations or liquidity.

On February 21, 2018, the Company entered into a mediated settlement regarding a wage and hour action in California by a former employee. In October 2016, the plaintiff alleged non-compliance with California State labor law, including missed or late meal breaks, for hourly employees of CIRCOR Aerospace, Inc. in Corona, California. The total settlement amount of \$2.4 million was initially recorded as a liability as of December 31, 2017. This settlement resolves all wage/hour claims by all potentially affected employees through the settlement date and was approved by the California Superior Court during 2018. The Company made the payment during the third and fourth quarters of 2019 to settle this claim.



Asbestos-related product liability claims continue to be filed against two of our subsidiaries: CIRCOR Instrumentation Technologies, Inc. (f/k/a Hoke, Inc.) (“Hoke”), the stock of which we acquired in 1998 and Spence Engineering Company, Inc., the stock of which we acquired in 1984. The Hoke subsidiary was divested in January 2020 (see Note 23, Subsequent Events). However, the Company has indemnified the buyer for asbestos-related claims that are made against Hoke. Due to the nature of the products supplied by these entities, the markets they serve and our historical experience in resolving these claims, we do not expect that these asbestos-related claims will have a material adverse effect on the financial condition, results of operations or liquidity of the Company.

#### Standby Letters of Credit

We execute standby letters of credit, which include bank guarantees, bid bonds and performance bonds, in the normal course of business to ensure our performance or payments to third parties. The aggregate notional value of these instruments was \$42.0 million at December 31, 2019 of which \$34.3 million were syndicated under the Credit Agreement. Our historical experience with these types of instruments has been good and no claims have been paid in the current or past several fiscal years. We believe that the likelihood of demand for payments relating to the outstanding instruments is remote. These instruments generally have expiration dates ranging from less than 1 month to 5 years from December 31, 2019.

The following table contains information related to standby letters of credit instruments outstanding as of December 31, 2019 (in thousands):

<u>Term Remaining</u>	<u>Maximum Potential Future Payments</u>
0–12 months	\$ 27,236
Greater than 12 months	14,754
Total	<u>\$ 41,990</u>

#### Commercial Contract Commitment

As of December 31, 2019, we had approximately \$106.9 million of commercial contract commitments related to open purchase orders.

#### Insurance

We maintain insurance coverage of a type and with such limits as we believe are customary and reasonable for the risks we face and in the industries in which we operate. While many of our policies do contain a deductible, the amount of such deductible is typically not material. Our accruals for insured liabilities are not discounted and take into account these deductibles and are based on claims filed and reported as well as estimates of claims incurred but not yet reported.

### **(18) Guarantees and Indemnification obligations**

As permitted under Delaware law, we have agreements whereby we indemnify certain of our officers and directors for certain events or occurrences while the officer or director is, or was, serving at our request in such capacity. The term of the indemnification period is for the officer’s or director’s lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited. However, we have directors and officers’ liability insurance policies that limit our exposure for events covered under the policies and should enable us to recover a portion of any future amounts paid. As a result of the coverage under these insurance policies, we believe the estimated fair value of these indemnification agreements is minimal and, therefore, have no liabilities recorded from those agreements as of December 31, 2019.

We record provisions for the estimated cost of product warranties, primarily from historical information, at the time product revenue is recognized. While we engage in extensive product quality programs and processes, our warranty obligation is affected by product failure rates, utilization levels, material usage, service delivery costs incurred in correcting a product failure, and supplier warranties on parts delivered to us. Should actual product failure rates, utilization levels, material usage, service delivery costs or supplier warranties on parts differ from our estimates, revisions to the estimated warranty liability would be required. Our warranty liabilities are included in accrued expenses and other current liabilities on our consolidated balance sheets.

The following table sets forth information related to our product warranty reserves for the years ended December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Balance beginning January 1 (1)	\$ 2,860	\$ 3,564
Provisions	1,894	2,643
Claims settled	(2,830)	(2,800)
Acquired reserves/other	(11)	(347)
Currency translation adjustment	(271)	(80)
Balance ending December 31	\$ 1,642	\$ 2,980

(1) The December 31, 2018 ending balance includes \$0.1 million in warranty reserves related to the I&S business, which was classified as held for sale at December 31, 2019. The January 1, 2019 beginning balance along with the current year activity has been adjusted to remove the effect of the I&S business.

Warranty obligations of \$1.6 million as of December 31, 2019 decreased \$1.3 million from \$3.0 million as of December 31, 2018. Decreases in warranty obligations were primarily driven by claims settled within our Refinery Valves business and to a lesser extent, claims settled within certain Industrial businesses.

## (19) Business Segment and Geographical Information

Our reportable segments have been identified in accordance with ASC Topic 280-10-50 through our evaluation of how the Company engages in business activities to earn revenues and incur expenses, which operating results are regularly reviewed by our chief operating decision maker (“CODM”) to assess performance and make decisions about resources to be allocated, and the availability of discrete financial information. CIRCOR’s reportable segments are generally organized based upon the end markets we sell our product and services into. No individual operating segments have been aggregated for purposes of determining our reportable segments. Our reporting segments are Energy, Aerospace & Defense and Industrial.

Each reporting segment is individually managed, as each requires different technology and marketing strategies, and has separate financial results that are reviewed by our CODM. Our CODM evaluates segment performance and determines how to allocate resources utilizing, among other data, segment operating income. Segment operating income excludes special and restructuring charges, net. In addition, certain administrative expenses incurred at the corporate level for the benefit of the reporting segments are allocated to the segments based upon specific identification of costs, employment related information or net revenues. Each segment contains related products and services particular to that segment.

Corporate is reported on a net “after allocations” basis. Inter-segment intercompany transactions affecting net operating profit have been eliminated within the respective reportable segments.

The amounts reported in the Corporate expenses line item in the following table consists primarily of the following: compensation and fringe benefit costs for executive management and other corporate staff; Board of Director compensation; corporate development costs (relating to mergers and acquisitions); human resource development and benefit plan administration expenses; legal, accounting and other professional and consulting costs; facilities, equipment and maintenance costs; and travel and various other administrative costs related to our corporate office and respective functions. The above costs are incurred in the course of furthering the business prospects of the Company and relate to activities such as: implementing strategic business growth opportunities; corporate governance; risk management; tax; treasury; investor relations and shareholder services; regulatory compliance; strategic tax planning; and stock transfer agent costs.

Our CODM evaluates segment operating performance using segment operating income. Segment operating income is defined as GAAP operating income excluding intangible amortization and amortization of fair value step-ups of inventory and fixed assets from acquisitions completed subsequent to December 31, 2011, the impact of restructuring related inventory write-offs, impairment charges and special charges or gains. The Company also refers to this measure as adjusted operating income. The Company uses this measure because it helps management understand and evaluate the segments’ core operating results and facilitate comparison of performance for determining incentive compensation achievement.

The following table presents certain reportable segment information (in thousands):

	As of and for the year ended December 31,		
	2019	2018	2017
<b>Net revenues</b>			
Energy	\$ 240,982	\$ 288,877	\$ 183,399
Aerospace & Defense	272,625	237,017	182,983
Industrial	450,706	487,576	139,110
Consolidated revenues	<u>\$ 964,313</u>	<u>\$ 1,013,470</u>	<u>\$ 505,492</u>
<b>Segment income</b>			
Energy - Segment Operating Income	\$ 30,394	\$ 38,779	\$ 21,708
Aerospace & Defense - Segment Operating Income	52,480	36,047	23,375
Industrial - Segment Operating Income	52,188	57,340	19,932
Corporate expenses	(25,262)	(30,299)	(21,744)
Subtotal	109,800	101,867	43,271
Special restructuring charges, net	5,186	5,848	2,559
Special other charges, net	17,686	13,061	7,330
Special and restructuring charges, net	22,872	18,909	9,889
Restructuring related inventory charges	(820)	346	—
Amortization of inventory step-up	—	6,600	4,300
Acquisition amortization	45,715	47,310	12,542
Acquisition depreciation	4,352	7,049	233
Restructuring and other cost, net	49,247	61,305	17,075
Consolidated Operating Income	<u>37,681</u>	<u>21,653</u>	<u>16,307</u>
Interest Expense, net (a)	48,609	52,975	10,841
Other Expense (Income), net (a)	(836)	(7,426)	1,826
(Loss) income from continuing operations before income taxes	<u>\$ (10,092)</u>	<u>\$ (23,896)</u>	<u>\$ 3,640</u>
<b>Identifiable assets</b>			
Energy	\$ 355,870	\$ 882,630	\$ 837,492
Aerospace & Defense	426,405	399,102	375,094
Industrial	1,405,056	1,279,048	1,408,217
Corporate	(716,386)	(769,168)	(714,004)
Consolidated Identifiable assets	<u>\$ 1,470,945</u>	<u>\$ 1,791,612</u>	<u>\$ 1,906,799</u>
<b>Capital expenditures</b>			
Energy	\$ 1,766	\$ 4,814	\$ 2,631
Aerospace & Defense	4,376	4,739	3,400
Industrial	5,757	9,813	5,928
Corporate	1,074	1,787	1,378
Consolidated Capital expenditures	<u>\$ 12,973</u>	<u>\$ 21,153</u>	<u>\$ 13,337</u>
<b>Depreciation and amortization</b>			
Energy	\$ 11,012	\$ 13,785	\$ 9,515
Aerospace & Defense	11,531	10,937	4,325
Industrial	46,564	49,939	11,881
Corporate	529	750	1,313
Consolidated Depreciation and amortization	<u>\$ 69,636</u>	<u>\$ 75,411</u>	<u>\$ 27,034</u>

The total assets for each reportable segment have been reported as the Identifiable Assets for that segment, including inter-segment intercompany receivables, payables and investments in other CIRCOR companies. Identifiable assets reported in Corporate include both corporate assets, such as cash, deferred taxes, prepaid and other assets, fixed assets, as well as the elimination of all inter-segment intercompany assets. The elimination of intercompany assets results in negative amounts reported in Corporate for Identifiable Assets. Corporate Identifiable Assets after elimination of intercompany assets were \$18.9 million, \$23.8 million, and \$15.6 million as of December 31, 2019, 2018 and 2017, respectively.

The following tables present net revenue and long-lived assets by geographic area. The net revenue amounts are based on shipments to each of the respective areas.

<u>Net revenues by geographic area (in thousands)</u>	<u>Year Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
United States	\$ 412,686	\$ 430,575	\$ 234,684
France	49,724	48,344	41,584
Germany	96,232	97,526	32,092
Canada	25,963	33,531	15,715
Saudi Arabia	11,562	9,643	6,260
United Kingdom	36,760	35,869	25,217
China	32,779	35,732	15,056
Norway	23,045	15,009	10,803
Rest of Europe	111,852	101,787	48,849
Rest of Asia-Pacific	96,711	86,261	44,816
Other	66,999	119,193	30,416
Total net revenues	<u>\$ 964,313</u>	<u>\$ 1,013,470</u>	<u>\$ 505,492</u>

<u>Long-lived assets by geographic area (in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
United States	\$ 90,136	\$ 117,784
Germany	52,843	41,852
UK	11,510	11,330
India	8,319	8,535
France	3,130	3,271
Other	6,241	6,900
Total long-lived assets	<u>\$ 172,179</u>	<u>\$ 189,672</u>

## (20) Other (Income) Expense, Net

The following table outlines other (income) expense, net (in thousands):

	<u>December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Pension - Interest cost	\$ 10,061	\$ 9,164	\$ —
Pension - Expected return on assets	(11,979)	(15,418)	—
Foreign Currency Translations	(395)	(1,677)	790
Other	1,477	505	1,036
Other (income) expense, net	<u>\$ (836)</u>	<u>\$ (7,426)</u>	<u>\$ 1,826</u>

On January 1, 2018, we adopted FASB ASU 2017-07, Compensation—Retirement Benefits (Topic 715), which amends the presentation requirements of service cost and other components of net benefit cost in the income statement. Service costs are recorded within the selling, general and administrative caption of our consolidated statements of (loss) income, while the other components of net benefit cost are recorded in the other expense (income), net caption of our consolidated statements of (loss) income. Refer to Note 2, Summary of Significant Accounting Policies, for further details of the adoption of ASU 2017-07.

## (21) Accumulated Other Comprehensive Loss

The following table summarizes the changes in accumulated other comprehensive loss, net of tax, which is reported as a component of shareholders' equity, for the year ended December 31, 2019, 2018 and 2017 (in thousands):

	Foreign Currency Translation Adjustments	Pension, net	Derivative	Total
Balance as of December 31, 2016	\$ (62,704)	\$ (13,557)	\$ —	\$ (76,261)
Other comprehensive income	34,119	5,412	—	39,531
Balance as of December 31, 2017	(28,585)	(8,145)	—	(36,730)
Other comprehensive loss	(20,523)	(10,970)	(1,516)	(33,009)
Balance as of December 31, 2018	(49,108)	(19,115)	(1,516)	(69,739)
Other comprehensive loss	(4,740)	(398)	(5,390)	(10,528)
Balance as of December 31, 2019	<u>\$ (53,848)</u>	<u>\$ (19,513)</u>	<u>\$ (6,906)</u>	<u>\$ (80,267)</u>

During the first quarter of 2019, an immaterial error was identified in the Company's calculation of currency translation adjustments related to goodwill, intangible assets and property, plant and equipment acquired in the FH acquisition. This error impacted other comprehensive income. Specifically, other comprehensive income (loss) was overstated by \$5.4 and \$2.2 million for the first quarter and fiscal 2018, respectively, and was understated by \$2.2 million for the first quarter of 2019. The Company has determined that these adjustments were not material to the current or prior periods, or the forecasted 2019 results utilized in the Company's 2018 goodwill impairment analyses. These items were adjusted during the first quarter of 2019. The quarterly impact (\$ in millions) in 2018 was as follows:

	Q1	Q2	Q3	Q4	2018
Overstated (understated) comprehensive income	<u>\$ 5.4</u>	<u>\$ (5.1)</u>	<u>\$ (0.2)</u>	<u>\$ 2.1</u>	<u>\$ 2.2</u>

## (22) Quarterly Financial Information

### Summary Quarterly Data — Unaudited

(in thousands, except per share information)

	First Quarter (1)	Second Quarter (1)	Third Quarter	Fourth Quarter
<b>Year Ended December 31, 2019</b>				
Net revenues	\$ 238,855	\$ 245,768	\$ 237,052	\$ 242,638
Gross profit	74,414	81,917	74,474	78,004
Net (loss) income	(4,634)	(18,520)	(112,337)	1,556
Earnings (loss) per common share:				
Basic	\$ (0.23)	\$ (0.93)	\$ (5.64)	\$ 0.08
Diluted	(0.23)	(0.93)	(5.64)	0.08
Dividends per common share	—	—	—	—
<b>Year Ended December 31, 2018</b>				
Net revenues	\$ 239,887	\$ 259,658	\$ 247,209	\$ 266,716
Gross profit	70,159	84,955	80,077	90,012
Net (loss) income	(17,441)	5,902	(6,841)	(21,004)
Earnings (loss) per common share:				
Basic	\$ (0.88)	\$ 0.30	\$ (0.34)	\$ (1.06)
Diluted	(0.88)	0.30	(0.34)	(1.06)
Dividends per common share	—	—	—	—

(1) First and second quarter results have been reclassified to reflect the classification of the EV and DV businesses as discontinued operations.

## (23) Subsequent Event

### Sale of I&S Business

During the fourth quarter of 2019, the Company entered into a definitive agreement to sell its non-core I&S business to Crane Co. for \$172 million, in cash, subject to working capital adjustments. The transaction closed on January 31, 2020. The I&S business manufactures valves, fittings, regulators and sampling systems primarily serving energy end markets. As of December 31, 2019, the I&S business is reported as "held for sale" within the current assets and current liabilities section of our balance sheet. We expect to record a gain on the I&S sale during the first quarter of 2020 in the range of \$35 million to \$40 million.

### Term Loan Repricing

On February 26, 2020, the Company amended its term loan to lower the interest rate associated with the applicable margin calculation. The new terms lower the interest rate on the Company's term loan from LIBOR plus an applicable margin of 3.5% to LIBOR plus an applicable margin of 3.25%, based on its existing corporate family rating from Moody's. The applicable margin reduces to LIBOR plus an applicable margin of 3.00%, with a corporate family rating from Moody's of B1 or better.

### Current Market Volatility

In March 2020, the World Health Organization declared the outbreak of COVID-19, which continues to spread throughout the U.S. and the world, as a pandemic. The outbreak is having an impact on the global economy, resulting in rapidly changing market and economic conditions, which may impact the Company.

Subsequent to year end and through the date of this filing, the Company has experienced a significant decline in its market capitalization to approximately 35% (based on the closing market price at March 26, 2019) below its consolidated book value. As a result, management has concluded that there was a goodwill and an intangible asset impairment triggering event for the Company in the first quarter of 2020, which will result in management performing an impairment evaluation of its goodwill and intangible asset balances. The decline in market capitalization and any prolonged material disruption of our employees, distributors, suppliers or customers can reasonably be expected to negatively impact our global sales and operating results and

could lead to valuation allowances or impairments of our goodwill or intangible assets, which were 271.9 million and 385.5 million million, respectively, as of December 31, 2019.

Given the continued uncertainty surrounding COVID-19, on March 20, 2020, the Company executed an \$80 million drawdown of its remaining available line of credit under its existing Credit Agreement. The Company took this action as a precautionary measure to increase the Company's cash position and help maintain financial flexibility. The proceeds from the drawdown will be available to be used for working capital, general corporate or other purposes.

## Schedule II — Valuation and Qualifying Accounts

## CIRCOR INTERNATIONAL, INC.

## Allowance for Doubtful Accounts

Description	Balance at Beginning of Period	Additions (Reductions)		Deductions (1)	Balance at End of Period
		Charged to Costs and Expenses	Charged to Other Accounts		
(in thousands)					
Year ended					
December 31, 2019					
Deducted from asset account:					
Allowance for doubtful accounts	\$ 2,270	\$ 1,777	\$ (198)	\$ (763)	\$ 3,086
Year ended					
December 31, 2018					
Deducted from asset account:					
Allowance for doubtful accounts	\$ 2,865	\$ (262)	\$ (95)	\$ (238)	\$ 2,270
Year ended					
December 31, 2017					
Deducted from asset account:					
Allowance for doubtful accounts	\$ 3,298	\$ (120)	\$ 223	\$ (536)	\$ 2,865

(1) Uncollectible accounts written off, net of recoveries.



**DESCRIPTION OF SECURITIES REGISTERED UNDER SECTION 12 OF THE EXCHANGE ACT**

The following description of the common stock, par value \$0.01 per share (the “Common Stock”) of CIRCOR International, Inc. (“us,” “our,” “we” or the “Company”), which is the only security of the Company registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), summarizes certain information regarding the Common Stock in our Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”), our Amended and Restated By-Laws (the “Bylaws”) and applicable provisions of Delaware General Corporation Law (the “DGCL”), and is qualified by reference to the Certificate of Incorporation and the Bylaws, which are incorporated by reference as Exhibit 3.1 and Exhibit 3.2, respectively, to the Annual Report on Form 10-K of which this Exhibit 4.1 is a part.

**Authorized Capital Stock**

Our authorized capital stock consists of 29,000,000 shares of Common Stock and 1,000,000 shares of preferred stock, par value \$0.01 per share (the “Preferred Stock”).

**Common Stock**

*Voting Rights.* Each holder of Common Stock is entitled to one vote for each share held of record on all matters to be voted upon by stockholders, unless otherwise provided by law or by our Certificate of Incorporation. All elections of directors are decided by a plurality, and all other questions are decided by a majority of the votes cast on such matter at a duly held meeting of stockholders at which a quorum is present, unless a larger vote is required by law, our Certificate of Incorporation or our Bylaws.

*Dividends.* Subject to the rights, powers and preferences of any outstanding Preferred Stock, and except as provided by law or in our Certificate of Incorporation, dividends may be declared and paid or set apart for payment upon the Common Stock out of legally available assets or funds when and as declared by the board of directors.

*Liquidation, Dissolution or Winding Up.* Subject to the rights, powers and preferences of any outstanding Preferred Stock, in the event of our liquidation, dissolution or winding up, our net assets will be distributed pro rata to the holders of Common Stock.

*Other Rights.* Holders of the Common Stock have no right to:

- convert the stock into any other security;
- have the stock redeemed;
- purchase additional stock; or
- maintain their proportionate ownership interest.

The Common Stock does not have cumulative voting rights. Holders of shares of the Common Stock are not required to make additional capital contributions.

## **Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects**

*Board of Directors.* Our Certificate of Incorporation and Bylaws provide for a board of directors divided as nearly equally as possible into three classes. Each class is elected to a term expiring at the annual meeting of stockholders held in the third year following the year of such election. The number of directors comprising our board of directors is fixed from time to time by the board of directors.

*Removal of Directors by Stockholders.* Our Certificate of Incorporation provides that, subject to the rights, if any, of any series of Preferred Stock, any member of our board of directors may be removed from office (i) only with cause and (ii) only by the affirmative vote of the holders of two-thirds of the shares then entitled to vote at an election of directors.

*Advance Notice Provisions.* Our Bylaws provide that a stockholder must notify us in writing, within timeframe specified in the Bylaws, of any stockholder nomination of a director and of any other business that the stockholder intends to bring at a meeting of stockholders.

*No Action By Written Consent.* Our Certificate of Incorporation provides that our stockholders may not act by written consent and may only act at duly called meetings of stockholders.

*Special Meetings of Stockholders.* Except as otherwise required by law and subject to the rights, if any, of the holders of any series of Preferred Stock, special meetings of stockholders may be called only by the board of directors.

*Preferred Stock.* We are authorized to issue up to 1,000,000 shares of “blank check” Preferred Stock, which may be issued in one or more series upon authorization of our board of directors. Our board of directors is authorized to fix the designations, powers, preferences and the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions of the shares of each series of Preferred Stock. A series of our Preferred Stock could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt. Our board of directors will make any determination to issue shares of Preferred Stock based upon its judgment as to the best interests of our stockholders. Our directors, in so acting, could issue Preferred Stock having terms that could discourage an acquisition attempt through which an acquirer may be able to change the composition of our board of directors, including a tender offer or other transaction that some, or a majority, of our stockholders might believe to be in their best interests or in which stockholders might receive a premium for their stock over the then-current market price of the stock.

*Delaware Business Combination Statute.* Section 203 of the DGCL is applicable to us. Section 203 of the DGCL restricts some types of transactions and business combinations between a corporation and a 15% stockholder. A 15% stockholder is generally considered by Section 203 to be a person owning 15% or more of the corporation’s outstanding voting stock. Section 203 refers to a 15% stockholder as an “interested stockholder.” Section 203 restricts these transactions for a period of three years from the date the stockholder acquires 15% or more of our outstanding voting

stock. With some exceptions, unless the transaction is approved by the board of directors and the holders of at least two-thirds of the outstanding voting stock of the corporation, Section 203 prohibits significant business transactions such as:

- a merger with, disposition of significant assets to or receipt of disproportionate financial benefits by the interested stockholder, and
- any other transaction that would increase the interested stockholder's proportionate ownership of any class or series of our capital stock.

The shares held by the interested stockholder are not counted as outstanding when calculating the two-thirds of the outstanding voting stock needed for approval.

The prohibition against these transactions does not apply if:

- prior to the time that any stockholder became an interested stockholder, the board of directors approved either the business combination or the transaction in which such stockholder acquired 15% or more of our outstanding voting stock, or
- the interested stockholder owns at least 85% of our outstanding voting stock as a result of a transaction in which such stockholder acquired 15% or more of our outstanding voting stock. Shares held by persons who are both directors and officers or by some types of employee stock plans are not counted as outstanding when making this calculation.

## CIRCOR Energy Products, LLC

Confidential

November 14, 2019

Lane Walker

### Incentive Compensation Agreement

Dear Lane,

This incentive compensation agreement ("**Agreement**") describes the incentives CIRCOR Energy Products, LLC. ("**Employer**") is offering you in connection with the potential divestiture by CIRCOR International, Inc. ("**CIRCOR**") of Employer and its other subsidiaries that collectively comprise its Distributed Valves business (the "**Business**").

1. **Purpose.** You will play a vital role as the leader of the Distributed Valves Business in supporting CIRCOR's efforts to sell the Business. You will be responsible for optimizing business results for Distributed Valves' business until such time as CIRCOR sells the Business. This Agreement provides you incentives for you to assist CIRCOR in accomplishing these objectives as described below. For purposes of this Agreement, "**Sale of the Business**" means the closing of a sale of the equity or at least substantially all of the assets of the Business to one or more persons who are not, directly or indirectly, controlled, directly or indirectly, by CIRCOR.
2. **Term.** The term of this Agreement (the "**Term**") shall commence on the date you sign this Agreement and end on September 30, 2020. During the Term, your title will remain Group President, Energy Division. Your reporting line and your base salary, bonus, long term incentive awards and other compensation will be unchanged. If your employment with the Employer ceases during the Term, you shall not be required to pay back the Signing Bonus and Relocation Expenses as provided in your Offer Letter dated May 15, 2018.
3. **Additional Executive Responsibilities.** In addition to fulfilling current job responsibilities and any duties materially consistent with your position with Employer through the Sale of the Business, you agree to cooperate fully with CIRCOR and its investment bankers, attorneys, accountants and advisors in connection with its efforts to sell the Business to any prospective buyer, regardless of its investment interest. You further agree to participate in making management presentations to prospective buyers, work with CIRCOR in creating a data room for the potential divestiture of the Business, collaborate with CIRCOR to satisfy potential buyers' due diligence requirements, and play an active and positive role in connection with the potential sale of the Business. You shall also comply with CIRCOR's Code of Conduct and other policies of CIRCOR.
4. **Incentives**
  - (a) You will be eligible for a special cash bonus if (i) you remain employed by the Employer or one of Employer's subsidiaries until the closing of the Sale of the Business, (ii) a Sale of the Business occurs during the Term, and (iii) you comply with Section 3 above ("**Transaction Bonus**"). The amount of the Transaction Bonus shall be determined by the Employer based on its performance against both quantitative and qualitative metrics that are outlined in Exhibit A to this Agreement.
  - (b) If CIRCOR offers you a position to continue providing full time services at CIRCOR or its subsidiaries following the Sale of the Business during the Term, the Transaction Bonus amount at target will be \$170,000. Whether or not you decide to accept any such offer shall not affect your eligibility to receive a Transaction Bonus as described in this Section 4(b). The Transaction Bonus shall be in addition to your regular annual bonus opportunity for the then current fiscal year on the terms and conditions applicable to other CIRCOR management

level employees. You will also continue to be eligible to earn vested rights under your outstanding equity awards if you continue employment with CIRCOR and its subsidiaries.

- (c) If the acquirer of the Business offers you a full-time position effective on or about the Sale of the Business during the Term and you accept it prior to the Sale of the Business:

(i) the Transaction Bonus amount at target will be \$170,000,

(ii) you shall be entitled to a pro-rata annual cash bonus for the then current fiscal year of the Sale of the Business based on the number of days you are employed by the Employer during such year prior to Sale of the Business, with payment to be made at the same time as to other CIRCOR employees,

(iii) CIRCOR and Employer shall arrange for the Severance Agreement to continue to apply to your employment with the acquirer and its subsidiaries such that you have severance protection if such employment is terminated by the acquirer or its affiliates without Cause within 12 months following the Sale of the Business or you terminate employment not later than sixty (60) days immediately following the Sale of the Business after having continued employment with the acquirer or its affiliates for thirty (30) days after the Sale of the Business.

(iv) you shall be entitled to accelerated vesting of your equity compensation awards as set forth in the Appendix to the Agreement upon Sale of the Business.

Unvested Options you have been granted will accelerate in full on the Sale of the Business, and you will be permitted to exercise your Options until the earlier of (A) the first anniversary of the Sale of the Business or (B) the Expiration Date specified in your Stock Option Agreement, any other provision of the Plan or your Stock Option Agreement notwithstanding.

- (d) If CIRCOR decides to dissolve or liquidate the Business during the Term and you have complied with Section 3 above, you shall be entitled to a cash retention bonus payment of up to fifty percent (50%) of the Transaction Bonus (the “**Retention Bonus**”), as determined in the Employer’s discretion after taking into account its performance against both the quantitative and qualitative metrics that are outlined in Exhibit A to this Agreement. For avoidance of doubt, you may not become eligible to receive both a Transaction Bonus and a Retention Bonus.
- (e) If your employment with Employer is terminated without Cause (as defined in your severance agreement dated October 10, 2018 (the “Severance Agreement”)) as of the Sale of the Business during the Term and you do not accept employment with the acquirer of the Business or its subsidiaries, then the Transaction Bonus amount at target will be \$170,000. The Transaction Bonus will be in addition to any other amounts you may become entitled to under the Severance Agreement. There shall be no accelerated vesting of any of your outstanding equity awards upon any such termination of employment, and you shall forfeit the unvested balance of any such awards upon a Sale of the Business. For purposes of this Section 4 and the Severance Agreement, a termination of your employment as of the Sale of the Business shall be considered to be without Cause if: (i) either you do not receive an offer to continue employment with CIRCOR prior to the Sale of the Business or receive an offer from CIRCOR in connection with the Sale that you determine, in good faith, represents a material and adverse change to the terms and conditions of your employment and (ii) either you do not receive an offer from the acquirer of the Business or you elect to not accept it prior to the Sale of the Business.
- (f) In no event shall you be entitled to compensation and benefits under more than one subsection of this Section 4. For example, if you elect not to accept an offer of employment from

CIRCOR as described in Section 4(b) and continue employment with the acquirer of the Business as described in Section 4(c), you shall be eligible to receive a single Transaction Bonus of \$170,000 for performance at target and any other benefits under this Agreement shall be payable under Section 4(c). Also, if you terminate employment without Cause on the Sale of the Business, you shall only be entitled to receive the benefits described in Section 4(e).

- (g) Neither the Transaction Bonus nor the Retention Bonus shall not under any circumstances be treated as eligible compensation for purposes of determining the amount payable under any employee benefit plan or arrangement maintained by CIRCOR or its subsidiaries, including CIRCOR's Section 401(k) plan.
5. **Payment Timing.** Employer will pay to you the applicable amount of the Transaction Bonus, if any, that may become payable as provided for under Section 4 above in a single lump sum within sixty (60) days following the closing of the Sale of the Business. Employer will pay to you the applicable amount of the Retention Bonus, if any, that may become payable as provided for under Section 4 in a single lump sum in 2020 before the end of the Term.
6. **Confidentiality.** You understand and agree that, as a further condition of the Transaction Bonus, you are to keep confidential the terms and existence of this Agreement and not disclose to anyone either the terms or the existence of this Agreement; provided, however, that you may make disclosure of this Agreement to your financial and legal advisers and your spouse if they first agree to be bound by this confidentiality provision
7. **Amendment.** The provisions of this Agreement may be amended or waived only by a written agreement executed and delivered by both parties. A waiver of any term, covenant or condition contained in this Agreement shall not be deemed a waiver of any other term, covenant or condition, and any waiver of any default in any such term, covenant or condition shall not be deemed a waiver of any later default thereof.
8. **Withholding; Section 409A.** All payments and benefits hereunder will be subject to reduction for customary withholding, including, without limitation, for federal and state taxes and social security taxes. Payments under this Agreement are intended to either be exempt from or comply with the provisions of Section 409A of the Internal Revenue Code of 1986, as amended ("Section 409A" of the "Code") and this Agreement shall, to the extent possible, be construed in accordance therewith. In any event, neither Employer nor CIRCOR makes any representation or warranty and will have no liability to you or any other person if any provisions of or payments under this Agreement are determined to constitute deferred compensation subject to Section 409A but not to satisfy the conditions of that section.
9. **Severability.** Each provision of this Agreement must be considered severable such that if any one provision or clause conflicts with existing or future applicable law or may not be given full effect because of such law, this will not affect any other provision of the Agreement, which, consistent with such law, will remain in full force and effect. All surviving clauses must be construed so as to effectuate the purpose and intent of the parties.
10. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which will be an original and all of which together will constitute one and the same instrument.
11. **Governing Law; Jury Trial Waiver.** This Agreement will be governed by the laws of the State of Delaware without regard to its conflicts of laws principles. Any action, suit or other legal proceeding arising under or relating to any provision of this Agreement must be commenced only in a court of the State of Delaware (or, if appropriate, a federal court located within the State of Delaware), and each of you and Employer consents to the jurisdiction of such a court. IF AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, EACH OF YOU AND EMPLOYER HEREBY IRREVOCABLY WAIVES ANY RIGHT TO A TRIAL BY JURY IN ANY ACTION, SUIT OR

OTHER LEGAL PROCEEDING ARISING UNDER OR RELATING TO ANY PROVISION OF THIS AGREEMENT OR THE RELEASE IT CONTEMPLATES.

12. **No Restriction on Sale or Other Disposition of the Business.** CIRCOR shall have the right in its sole and absolute discretion to sell or dispose of the Business, in whole or in part, at any time.
13. **Coordination with Other Agreements.** This Agreement is in addition to the Severance Agreement and the Change in Control Agreement that you have already signed. By signing this Agreement, you acknowledge that no benefits shall be payable under your Change in Control Severance Agreement on account of the Sale of the Business or any termination of your employment that may occur in connection with the Sale of the Business.
14. **Prior Discussions.** This Agreement supersedes any written or oral communications between CIRCOR or Employer and you with respect to transaction or retention bonuses.

If you have any questions about the matters covered in this Agreement, please call Andrew Farnsworth, Chief Human Resources Officer of CIRCOR at (781) 270-1203.

Very truly yours,

/s/ Scott A. Buckhout

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**Scott A. Buckhout**  
**President and Chief Executive Officer**

Intending to be legally bound, I have signed this Agreement as of the date set forth below.

/s/ Lane Walker

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**Lane Walker**

**November 18, 2019**

## **Exhibit A – Metrics Governing Payout of Transaction Bonus**

50% of the bonus payout to be based on achievement of the following quantitative targets:

- AOI
- Cash
- Net Sales
- Targets to be set based on Q4 2019 Forecast and quarterly budgets for 2020

50% of the bonus payout to be based on achieving qualitative targets tied to supporting the Sale of the Business and completing the Sale of the Business

Final achievement/payout to be based on CEO assessment.

Payout capped at 100% of target.



**AMENDMENT NO. 2**, dated as of February 19, 2020 (this “Amendment”), to the Credit Agreement dated as of December 11, 2017 (as amended by Amendment No. 1, dated January 12, 2018 and as further amended, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), among CIRCOR INTERNATIONAL, INC., a Delaware corporation (the “Borrower”), the other Credit Parties party thereto, DEUTSCHE BANK AG NEW YORK BRANCH, as Term Loan Administrative Agent and as Collateral Agent, TRUIST BANK (fka SunTrust Bank), as the Revolver Administrative Agent, Swing Line Lender and an LC Issuer and each other Lender and LC Issuer from time to time party thereto (collectively, the “Lenders”). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to them in the Credit Agreement.

WHEREAS, Section 11.12 of the Credit Agreement provides that any amendment which shall have the effect of extending or postponing the expiration date of any Letter of Credit beyond the latest expiration date for a Letter of Credit provided for in the Credit Agreement shall require the consent of the Borrower, the Administrative Agents, the LC Issuers and each Revolving Lender;

WHEREAS, the Borrower, the Administrative Agents, the LC Issuers and the Revolving Lenders desire to amend Section 2.05 of the Credit Agreement in order to permit the issuance, subject to the term and conditions of the Credit Agreement, of up to \$30,000,000 of Letters of Credit with an expiry date (including any renewal periods) occurring later than two years from the date of issuance thereof but prior to 5 Business Days prior to the Revolving Facility Termination Date;

WHEREAS, the Borrower requested that the LC Issuers issue and the LC Issuers issued Letters of Credit with an expiry date (including any renewal periods) occurring later than two years from the date of issuance thereof but prior to 5 Business Days prior to the Revolving Facility Termination Date in excess of the aggregate amount permitted under Section 2.05(a) prior to the date hereof;

WHEREAS, the Required Revolving Lenders may consent to a waiver that by its terms affects the rights or duties under the Credit Agreement of the Required Revolving Lenders (but not Lenders holding Loans or Commitments of any Other Class);

WHEREAS, the Required Revolving Lenders wish to waive any defaults that have occurred under the Credit Agreement prior to the date hereof solely in respect of such Letters of Credit exceeding the aggregate amount permitted under Section 2.05(a) prior to the date hereof;

NOW, THEREFORE, in consideration of the premises contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound hereby, agree as follows:

SECTION 1. Amendments. The penultimate sentence of Section 2.05(a) of the Credit Agreement is hereby amended and restated in its entirety as follows:

“Subject to Section 2.05(c) below, each Letter of Credit shall have an expiry date (including any renewal periods) occurring not later than the earlier of (x) two years from the date of issuance thereof, or (y) 5 Business Days prior to the Revolving Facility Termination Date; *provided that*, at the sole discretion of the applicable LC Issuer, up to \$30,000,000 in aggregate amount of Letters of Credit may have an expiry date (including any renewal periods) occurring later than two years from the date of issuance thereof but prior to 5 Business Days prior to the Revolving Facility Maturity Date.”

SECTION 2. **Limited Waiver**. The Required Revolving Lenders hereby agree to waive any default that has occurred prior to the date hereof solely as a result of the LC Issuers having issued Letters of Credit with an expiry date (including any renewal periods) occurring later than two years from the date of issuance thereof but prior to 5 Business Days prior to the Revolving Facility Termination Date in excess of the aggregate amount permitted under Section 2.05(a) prior to the date hereof.

SECTION 3. **Effectiveness**. Sections 1 and 2 of this Amendment shall become effective on the date that the Administrative Agents shall have received counterparts to this Amendment, duly executed by the Borrower, each Administrative Agent, each LC Issuer and each Revolving Lender. This Amendment is a “Loan Document” for purposes of the Credit Agreement and the other Loan Documents.

SECTION 4. **Counterparts**. This Amendment may be executed in any number of counterparts and by the different parties hereto in different counterparts, each of which when so executed and delivered shall be deemed to be an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Amendment by facsimile transmission or other electronic imaging (including in .pdf format) shall be effective as delivery of a manually executed counterpart hereof.

SECTION 5. **Applicable Law**. **THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

SECTION 6. **Headings**. The headings of this Amendment are for purposes of reference only and shall not limit or otherwise affect the meaning hereof.

SECTION 7. **Effect of Amendment**. Except as expressly set forth herein, (i) this Amendment shall not by implication or otherwise limit, impair, constitute a waiver of or otherwise affect the rights and remedies of the Lenders, the Administrative Agents or the LC Issuers, in each case under the Credit Agreement or any other Loan Document, and (ii) shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other provision of either such agreement or any other Loan Document. Each and every term, condition, obligation, covenant and agreement contained in the Credit Agreement or any other Loan Document (for avoidance of doubt, in each case, as altered, modified or amended as expressly set forth herein) is hereby ratified and re-affirmed in all respects and shall continue in full force and effect.

*[Signature Pages Follow]*

(a)

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

CIRCOR INTERNATIONAL, INC.

By: /s/ Tanya L. Dawkins  
Name: Tanya L. Dawkins  
Title: VP, Treasurer

[Signature Page to Amendment]

DEUTSCHE BANK AG NEW YORK BRANCH,  
as Term Loan Administrative Agent and Revolving Lender

By: /s/ Michael Strobel  
Name: Michael Strobel  
Title: Vice President

By: /s/ Philip Tancorra  
Name: Philip Tancorra  
Title: Associate

[Signature Page to Amendment]

TRUIST BANK (fka SunTrust Bank), as Revolver Administrative Agent, LC Issuer and  
Revolving Lender

By: /s/ Lisa Garling  
Name: Lisa Garling  
Title: Director

[Signature Page to Amendment]

CITIZENS BANK, N.A., as Revolving Lender and LC Issuer

By: /s/ Caroline Conole  
Name: Caroline Conole  
Title: Assistant Vice President

[Signature Page to Amendment]

HSBC BANK USA, N.A., as Revolving Lender and LC Issuer

By: /s/ Joanna London  
Name: Joanna London  
Title: Vice President

[Signature Page to Amendment]



KEYBANK NATIONAL ASSOCIATION, as Revolving Lender

By: /s/ Brian P. Fox

Name: Brian P. Fox

Title: Senior Vice President

[Signature Page to Amendment]

## I. Subsidiaries of CIRCOR International, Inc.:

1. CIRCOR Aerospace, Inc., a Delaware Corporation
2. CIRCOR Dovianus Holdings B.V. a Netherlands Limited Liability Company\*
3. CIRCOR Energy, LLC, a Delaware Limited Liability Company
4. CIRCOR Energy Products (Canada), ULC, an Alberta Unlimited Liability Company\*
5. CIRCOR France SAS, a French Corporation\*
6. CIRCOR German Holdings Management GmbH, a German Closed Corporation\*
7. CIRCOR Holdings, Inc., a Delaware Corporation\*
8. CIRCOR (Jersey) Ltd., a Jersey Company\* (83% ownership)
9. CIRCOR, LLC, a Massachusetts Limited Liability Company
10. CIRCOR Luxembourg Holdings Sarl, a Luxembourg Limited Liability Company\*
11. CIRCOR Naval Solutions, LLC, a Delaware Limited Liability Company
12. CIRCOR Pipeline Engineering, LLC, a Delaware Limited Liability Company\*
13. CIRCOR Precision Metering, LLC, a Delaware Limited Liability Company
14. CIRCOR Pumps North America, LLC, a Delaware Limited Liability Company
15. Downstream Holding, LLC, a Delaware Limited Liability Company\*
16. Leslie Controls, Inc., a Delaware Corporation
17. Spence Engineering Company, Inc., a Delaware Corporation

## II. Subsidiaries of CIRCOR Aerospace, Inc.:

1. CIRCOR Instrumentation Technologies, Inc., a New York Corporation
2. CIRCOR IP Holding Co., a Delaware Corporation\*

## III. Subsidiary of CIRCOR Energy, LLC:

1. CIRCOR Energy Products, LLC, an Oklahoma Limited Liability Company

## IV. Subsidiaries of CIRCOR Holdings, Inc.:

1. CIRCOR (Jersey) Ltd., a Jersey Company\* (17% ownership)
2. CIRCOR Netherlands Holdings B.V., a Netherlands Limited Liability Company\*
3. Suzhou Circor Valve Company, Ltd, a Chinese Foreign Owned Enterprise\*

## V. Subsidiaries of CIRCOR Instrumentation Technologies, Inc.:

1. CIRCOR Mexico, S.A. de C.V., a Mexico Corporation (99%)
2. CIRCOR Empleados de Mexico S.A. de C.V., a Mexico Corporation\* (99%)
3. Dopak, Inc., a Texas Corporation\*

## VI. Subsidiaries of CIRCOR Energy Products, LLC:

1. CIRCOR Mexico, S.A. de C.V., a Mexico Corporation\* (1%)
2. CIRCOR Empleados de Mexico S.A. de C.V., a Mexico Corporation\* (1%)

## VII. Subsidiaries of CIRCOR (Jersey), Ltd.

1. CIRCOR German Holdings, LLC, a Delaware Limited Liability Company\*

2. CIRCOR Singapore Pte Ltd, a Singapore Private Limited Company\*

VIII. Subsidiaries of CIRCOR German Holdings, LLC:

1. CIRCOR German Holdings GmbH & Co. KG, a German Private Company\*

IX. Subsidiaries of CIRCOR German Holdings GmbH & Co. KG:

1. Allweiler GmbH, a German Corporation
2. IMO AB, a Sweden Company
3. Regeltechnik Kornwestheim GmbH, a German Corporation
4. SCHROEDAHL-ARAPP Spezialarmaturen GmbH & Co. KG, a German Corporation

X. Subsidiaries of CIRCOR Luxembourg Holdings, Sarl:

1. CEP Holdings Sarl, a Luxembourg Limited Liability Company\* (6% ownership)
2. CIRCOR do Brasil Participações LTDA, a Brazilian Corporation\* (>99%)
3. CIRCOR India Holdings BV, a Netherlands Corporation\*
4. CIRCOR Middle East FZE, a United Arab Emirates Corporation\*
5. CIRCOR (Barbados) Holdings SARL, a Barbados Entity \*
6. Howitzer Acquisition Limited, a United Kingdom Corporation\*

XI. Subsidiaries of CIRCOR do Brasil Participações LTDA:

1. CIRCOR do Brasil Industria e Comercio LTDA, a wholly owned subsidiary of CIRCOR do Brasil Participacoes LTDA\*

XII. Subsidiaries of CIRCOR Energy Products (Canada) ULC:

1. Imo Industries (Canada) Inc., a Canadian Corporation\*

XIII. Subsidiaries of Howitzer Acquisition Limited, a United Kingdom Corporation:

1. Hale Hamilton (Valves) Limited, a United Kingdom Corporation
2. Pipeline Engineering Supply Co., Limited, a United Kingdom Corporation\*
3. TapcoEnpro UK Limited, a United Kingdom Company\*

XIV. Subsidiaries of CIRCOR India Holdings BV, a Netherlands Corporation\*

1. CIRCOR Flow Technologies India Private Ltd., an Indian Private Company\*
2. CIRCOR India LLC, a Delaware Limited Liability Company\*

XV. Subsidiaries of CIRCOR France, a French Corporation

1. CIRCOR Bodet SAS, a French Corporation\*
2. CIRCOR Industria SAS, a French Corporation
3. CIRCOR Maroc SARL A.U., a Moroccan Corporation\*

XVI. Subsidiaries of Downstream Holding, LLC, a Delaware Limited Liability Company

1. DeltaValve, LLC, a Delaware Limited Liability Company
2. TapcoEnpro, LLC, a Delaware Limited Liability Company

XVII. Subsidiaries of CIRCOR Dovianus Holdings B.V.

1. CIRCOR Netherlands II Holding B.V., a Netherlands Limited Liability Company\*
2. CIRCOR Pump (Weihai) Company Ltd., a Chinese Foreign Owned Enterprise\*
3. Colfax Fluid Handling Middle East Ltd., a England / Wales Entity\*
4. Dovianus B.V., a Netherlands Limited Liability Company\*

XVIII. Subsidiaries of Dovianus B.V.\*

1. Allweiler India Private Limited (formerly known as Tushaco Pumps Private Limited), an Indian Private Company (99.999%)

XIX. Subsidiaries of Allweiler GmbH

1. Allweiler A/S, a Norway Entity\*
2. Allweiler AlFarid Pumps Co., (UAE) (EG) (28%), a United Arab Emirates Entity\*
3. Allweiler Finland Oy AB, a Finland Entity\*
4. CIRCOR Allweiler Imo SpA, a Italian Entity\*
5. CIRCOR Europe Finance Ltd., a England / Wales Entity\*
6. CIRCOR IMO Allweiler, a French Corporation\*
7. PD-Technik Ingenieurbüro GmbH, a German Entity\*
8. Rapid Allweiler Pumps & Engineering Company (Pty) Ltd., a South Africa Entity (35%)

XX. Subsidiaries of CIRCOR Sub Holding LLC

1. CIRCOR Sub Ltd., a England/Wales Company
2. Portland Valve LLC, a Delaware Limited Liability Company

XXI. Subsidiaries of CIRCOR Netherlands II Holding B.V.

1. Houttuin BV, a Netherlands Limited Liability Company\*
2. SES-Rosscor B.V., a Netherlands Limited Liability Company\* (19.9%)

XXII. Subsidiaries of CIRCOR Naval Solutions, LLC

1. CIRCOR Sub Holding LLC, a Delaware Limited Liability Company

\*Subsidiaries designated as Immaterial Subsidiaries

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-91229, 333-125237, 333-190295, 333-197754, and 333-231466) of CIRCOR International, Inc. of our report dated March 30, 2020 relating to the financial statements and financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP  
Boston, Massachusetts  
March 30, 2020

## CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott A. Buckhout, certify that:

1. I have reviewed this annual report on Form 10-K of CIRCOR International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2020

Signature: \_\_\_\_\_

/s/ Scott A. Buckhout

**Scott A. Buckhout**

**President and Chief Executive Officer**

## CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory C. Bowen, certify that:

1. I have reviewed this annual report on Form 10-K of CIRCOR International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2020

Signature: /s/ Gregory C. Bowen

**Gregory C. Bowen**

**Senior Vice President and Corporate Controller**

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned officers, who are the President and Chief Executive Officer and Executive Vice President and Chief Financial Officer of CIRCOR International, Inc. (the "Company"), each hereby certifies to the best of his knowledge, that the Company's annual report on Form 10-K to which this certification is attached (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Scott A. Buckhout

**Scott A. Buckhout**

**President and Chief Executive Officer**

*Principal Executive Officer*

March 30, 2020

/s/ Gregory C. Bowen

**Gregory C. Bowen**

**Senior Vice President and Corporate Controller**

*Principal Financial Officer*

March 30, 2020