

ESCO TECHNOLOGIES INC  
Form 10-K  
November 29, 2017

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, DC 20549

**FORM 10-K**

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

For the fiscal year ended September 30, 2017

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 1-10596

**ESCO Technologies Inc.**

(Exact name of registrant as specified in its charter)

Missouri 43-1554045  
(State or other jurisdiction (I.R.S. Employer  
of incorporation or organization) Identification No.)

9900A Clayton Road  
St. Louis, Missouri 63124-1186  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code:  
(314) 213-7200

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.01 per share	New York Stock Exchange

Securities registered pursuant to section 12(g) of the Act:  
None

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 Act.

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

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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 and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

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

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

Aggregate market value of the Common Stock held by non-affiliates of the registrant as of the close of trading on March 31, 2017, the last business day of the registrant's most recently completed second fiscal quarter: approximately \$1,455,041,000.\*

\* Based on the New York Stock Exchange closing price. For purpose of this calculation only, without determining whether the following are affiliates of the registrant, the registrant has assumed that (i) its directors and executive officers are affiliates, and (ii) no party who has filed a Schedule 13D or 13G is an affiliate.

Number of shares of Common Stock outstanding at November 6, 2017: 25,835,902

**DOCUMENTS INCORPORATED BY REFERENCE:**

Part III of this Report incorporates by reference certain portions of the registrant's definitive Proxy Statement for its 2018 Annual Meeting of Shareholders, which the registrant currently anticipates first sending to shareholders on or about December 14, 2017 (hereinafter, the "2017 Proxy Statement").

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## FORWARD-LOOKING INFORMATION

Statements contained in this Form 10-K regarding future events and the Company's future results that are based on current expectations, estimates, forecasts and projections about the Company's performance and the industries in which the Company operates are considered "forward-looking statements" within the meaning of the safe harbor provisions of the Federal securities laws. These include, without limitation, statements about: the adequacy of the Company's buildings, machinery and equipment; the adequacy of the Company's credit facilities and future cash flows; the outcome of litigation, claims and charges; future costs relating to environmental matters; continued reinvestment of foreign earnings and the resulting U.S. tax liability in the event such earnings are repatriated; repayment of debt within the next twelve months; the outlook for 2018 and beyond, including amounts, timing and sources of 2018 sales, revenues, sales growth, EBIT, EBITDA, EBIT margins and EPS; interest on Company debt obligations; the ability of expected hedging gains or losses to be offset by losses or gains on related underlying exposures; the Company's ability to increase shareholder value; acquisitions; income tax expense and the Company's expected effective tax rate; minimum cash funding required by, expected benefits payable from, and Management's assumptions about future events which could affect liability under, the Company's defined benefit plans and other postretirement benefit plans; the recognition of unrecognized compensation costs related to share-based compensation arrangements; the Company's exposure to market risk related to interest rates and to foreign currency exchange risk; the likelihood of future variations in the Company's assumptions or estimates used in recording contracts and expected costs at completion under the percentage of completion method; the Company's estimates and assumptions used in the preparation of its financial statements; cost and estimated earnings on long-term contracts; valuation of inventories; estimates of uncollectible accounts receivable; the risk of goodwill impairment; the Company's estimates utilized in software revenue recognition, non-cash depreciation and the amortization of intangible assets; the valuation of deferred tax assets; estimates of future cash flows and fair values in connection with the risk of goodwill impairment; amounts of NOL not realizable and the timing and amount of the reduction of unrecognized tax benefits; the effects of implementing recently issued accounting pronouncements; and any other statements contained herein which are not strictly historical. Words such as expects, anticipates, targets, goals, projects, intends, plans, believes, estimates, variations of such words, and similar expressions are intended to identify such forward-looking statements.

Investors are cautioned that such statements are only predictions and speak only as of the date of this Form 10-K, and the Company undertakes no duty to update the information in this Form 10-K except as may be required by applicable laws or regulations. The Company's actual results in the future may differ materially from those projected in the forward-looking statements due to risks and uncertainties that exist in the Company's operations and business environment, including but not limited to those described herein under "Item 1A, Risk Factors," and the following: Aclara's continuing ability to perform contracts guaranteed by the Company; the impacts of labor disputes, civil disorder, wars, elections, political changes, terrorist activities or natural disasters on the Company's operations and those of the Company's customers and suppliers; the timing and content of future customer orders; the appropriation and allocation of government funds; the termination for convenience of government and other customer contracts; the timing and magnitude of future contract awards; weakening of economic conditions in served markets; the success of the Company's competitors; changes in customer demands or customer insolvencies; competition; intellectual property rights; technical difficulties; the availability of selected acquisitions; delivery delays or defaults by customers; performance issues with key customers, suppliers and subcontractors; material changes in the costs of certain raw

materials; material changes in the cost of credit; changes in laws and regulations including but not limited to changes in accounting standards and taxation requirements; costs relating to environmental matters; litigation uncertainty; and the Company's successful execution of internal restructuring and other plans.



## PART I

### Item 1. Business

#### The Company

The Registrant, ESCO Technologies Inc. (ESCO), is a producer of engineered products and systems sold to customers worldwide, primarily for utility, industrial, aerospace and commercial applications. ESCO conducts its business through a number of wholly-owned direct and indirect subsidiaries. ESCO and its subsidiaries are referred to in this Report as “the Company.”

ESCO was incorporated in Missouri in August 1990 as a wholly owned subsidiary of Emerson Electric Co. (Emerson) to be the indirect holding company for several Emerson subsidiaries, which were primarily in the defense business. Ownership of the Company was spun off by Emerson to its shareholders on October 19, 1990, through a special distribution. Since that time, through a series of acquisitions and divestitures, the Company has shifted its primary focus from defense contracting to the production and supply of engineered products and systems marketed to utility, industrial, aerospace and commercial users.

The Company’s fiscal year ends September 30. Throughout this document, unless the context indicates otherwise, references to a year (for example 2017) refer to the Company’s fiscal year ending on September 30 of that year.

The Company is organized based on the products and services it offers, and classifies its business operations in segments for financial reporting purposes. As a result of the acquisitions of Plastique and Fremont discussed in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” beginning in the second quarter of 2016 Management expanded the presentation of its reporting segments to include a fourth segment, Technical Packaging. Prior period segment amounts have been reclassified to conform to the current period presentation.

The Company’s four segments, together with the significant domestic and foreign operating subsidiaries within each segment during 2017, are as follows:

***Filtration/Fluid Flow (Filtration):***

PTI Technologies Inc. (PTI)

VACCO Industries (VACCO)

Crissair, Inc. (Crissair)

Westland Technologies, Inc. (Westland)

Mayday Manufacturing Co. (Mayday)

Hi-Tech Metals, Inc. (Hi-Tech)

***RF Shielding and Test (Test):***

ETS-Lindgren Inc.

Except as the context otherwise indicates, the term “ETS-Lindgren” as used herein includes ETS-Lindgren Inc. and the Company’s other Test segment subsidiaries.

***Utility Solutions Group (USG):***

Doble Engineering Company

Morgan Schaffer Ltd. (Morgan Schaffer)

NRG Systems, Inc. (NRG)

Except as the context otherwise indicates, the term “Doble” as used herein includes Doble Engineering Company and the Company’s USG subsidiaries other than Morgan Schaffer and NRG.

***Technical Packaging:***

Thermoform Engineered Quality LLC (TEQ)

Plastique Limited

Plastique Sp. z o.o.

Plastique Limited and Plastique Sp. z o.o. are referred to together herein as “Plastique.”

The Company's operating subsidiaries are engaged primarily in the research, development, manufacture, sale and support of the products and systems described below. Their respective businesses are subject to a number of risks and uncertainties, including without limitation those discussed in Item 1A, "Risk Factors." See also Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Forward-Looking Information."

ESCO is continually seeking ways to save costs, streamline its business processes and enhance the branding of its products and services. In October 2015 the Company announced several restructuring and realignment actions involving the Test and USG segments which were completed during 2016, including closing ETS-Lindgren's operating subsidiaries in Germany and the United Kingdom and consolidating their operations into other existing Test facilities; eliminating certain underperforming product line offerings in Test primarily related to lower margin international shielding end markets; reducing headcount in Test's U.S. business; and closing Doble's Brazil operating office and consolidating Doble's South American sales and support activities.

ESCO is also continually seeking opportunities to supplement its growth by making strategic acquisitions. During 2017, the Company acquired Mayday, a leading manufacturer of mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls, and actuation systems for the aerospace and defense industries; Hi-Tech, a full-service metal processor offering aerospace original equipment manufacturers ("OEMs") and Tier 1 suppliers a large portfolio of processing services including anodizing, cadmium and zinc-nickel plating, organic coatings, non-destructive testing, and heat treatment; NRG, the global market leader in the design and manufacture of decision support tools for the renewable energy industry, primarily wind; and the assets of Morgan Schaffer Inc., which designs, develops, manufactures and markets an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers. In August 2017, the Company acquired the assets of Vanguard Instruments Company (Vanguard Instruments), a test equipment provider serving the global electric utility market. More information about these 2017 acquisitions as well as the Company's acquisition activity during 2016 and 2015 is provided in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in Note 2 to the Consolidated Financial Statements included herein.

## Products

The Company's principal products are described below. See Note 13 to the Consolidated Financial Statements included herein for financial information regarding business segments and 10% customers.

### *Filtration*

The Filtration segment accounted for approximately 41%, 36% and 37% of the Company's total revenue in 2017, 2016 and 2015, respectively.

PTI is a leading supplier of filtration and fluid control products serving the commercial aerospace, military aerospace and various industrial markets. Products include filter elements, manifolds, assemblies, modules, indicators and other

related components. All products must meet stringent qualification requirements and withstand severe operating conditions. Product applications include: hydraulic, fuel, cooling and air filtration systems for fixed wing and rotary aircraft, mobile transportation and construction equipment, aircraft engines and stationary plant equipment. PTI supplies products worldwide to OEMs and the U.S. government under long term contracts, and to the commercial and military aftermarket through distribution channels.

VACCO supplies filtration and fluid control products including valves, manifolds, filters, regulators and various other components for use in the space, military aerospace, defense missile systems, U.S. Navy and commercial industries. Applications include aircraft fuel and de-icing systems, missiles, satellite propulsion systems, satellite launch vehicles and other space transportation systems such as the Space Launch System. VACCO also utilizes its multi-fab technology and capabilities to produce products for use in space and U.S. Navy applications.

Crissair supplies a wide variety of custom and standard valves, actuators, manifolds and other various components to the aerospace, defense, automotive and commercial industries. Product applications include hydraulic, fuel and air filtration systems for commercial and military fixed wing and rotary aircraft, defense missile systems and commercial engines. Crissair supplies products worldwide to OEMs and to the U.S. Government under long term contracts and to the commercial aftermarket through distribution channels.

Westland is a leading designer and manufacturer of elastomeric-based signature reduction solutions to enhance U.S. Navy maritime survivability. Westland's products include complex tiles and other shock and vibration dampening systems that reduce passive acoustic signatures and/or modify signal (radar, infrared, acoustical, sonar) emission and reflection to reduce or obscure a vessel's signature. Westland's products are used on the majority of the U.S. Naval fleet including submarines, surface ships and aircraft carriers.

Mayday is a manufacturer of mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls, and actuation systems for the aerospace and defense industry.

Hi-Tech is a full-service metal processor offering aerospace OEM's and Tier 1 suppliers a large portfolio of processing services including anodizing, cadmium and zinc-nickel plating, organic coatings, non-destructive testing, and heat treatment. Its portfolio includes over 100 OEM processing approvals.

### *Test*

The Test segment accounted for approximately 23%, 28% and 33% of the Company's total revenue in 2017, 2016 and 2015, respectively.

ETS-Lindgren designs and manufactures products to measure and contain magnetic, electromagnetic and acoustic energy. It supplies customers with a broad range of isolated environments and turnkey systems, including RF test facilities, acoustic test enclosures, RF and magnetically shielded rooms, secure communication facilities, RF measurement systems and broadcast and recording studios. Many of these facilities include proprietary features such as shielded doors and windows. ETS-Lindgren also provides the design, program management, installation and integration services required to successfully complete these types of facilities.

ETS-Lindgren also supplies customers with a broad range of components including RF absorptive materials, RF filters, active compensation systems, antennas, antenna masts, turntables and electric and magnetic probes, RF test cells, proprietary measurement software and other test accessories required to perform a variety of tests. ETS-Lindgren offers a variety of services including calibration for antennas and field probes, chamber certification, field surveys, customer training and a variety of product tests. ETS-Lindgren's test labs are accredited by the following organizations: American Association for Laboratory Accreditation, National Voluntary Laboratory Accreditation Program and CTIA-The Wireless Association Accredited Test Lab. ETS-Lindgren serves the acoustics, medical, health and safety, electronics, wireless communications, automotive and defense markets.

### *USG*

The USG segment accounted for approximately 24%, 22% and 23% of the Company's total revenue in 2017, 2016 and 2015, respectively.

Doble develops, manufactures, and delivers diagnostic testing solutions for electrical equipment comprising the electric power grid, and enterprise management systems, that are designed to optimize electrical power assets and system performance, minimize risk and improve operations. It combines three core elements for customers – diagnostic test and monitoring instruments, expert consulting, and testing services – and provides access to its large reserve of related empirical knowledge. Doble flagship solutions include protection diagnostics with the Doble Protection Suite and F6000 series, the M4100 and new transformational patent-pending technology of the M7100 Doble Tester, the dobleARMS® asset risk management system, and the Enoserv PowerBase® and DUCe compliance tools for the North American Electric Reliability Corporation Critical Infrastructure Protection plan (NERC CIP), a set of requirements designed to secure the assets required for operating North America’s bulk electric system. Doble has seven offices in the United States and nine international offices.

Morgan Schaffer designs, develops, manufactures and markets an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers.

NRG is the global market leader in the design and manufacture of decision support tools for the renewable energy industry, primarily wind.

### ***Technical Packaging***

The Technical Packaging segment accounted for approximately 12%, 13% and 7% of the Company’s total revenue in 2017, 2016 and 2015, respectively. Prior to 2016 the Technical Packaging business was included in the Filtration segment.

TEQ produces highly engineered thermoformed products and packaging materials for medical, pharmaceutical, retail, food and electronic applications. Through its alliance partner program, TEQ also provides its clients with a total packaging solution including engineering services and testing, sealing equipment and tooling, contract manufacturing, and packing.

Plastique, with locations in the UK and Poland, designs and manufactures plastic and pulp fibre packaging for customers in the personal care, household products, pharmaceutical, food and broader retail markets. Through its Fibrepak brand, Plastique became the first European manufacturer of smooth-surfaced press-to-dry pulp packaging, a sustainable alternative to plastic packaging.

## **Marketing and Sales**

The Company's products generally are distributed to customers through a domestic and foreign network of distributors, sales representatives, direct sales teams and in-house sales personnel.

The Company's sales to international customers accounted for approximately \$183 million (27%), \$168 million (29%) and \$152 million (28%) of the Company's total revenue in 2017, 2016 and 2015, respectively. See Note 13 to the Consolidated Financial Statements included herein for financial information regarding geographic areas. See also Item 1A, "Risk Factors," for a discussion of risks of the Company's international operations.

Some of the Company's products are sold directly or indirectly to the U.S. Government under contracts with the Army, Navy and Air Force and subcontracts with prime contractors of such entities. Direct and indirect sales to the U.S. Government, primarily related to the Filtration segment, accounted for approximately 20%, 14% and 15% of the Company's total revenue in 2017, 2016 and 2015, respectively.

## **Intellectual Property**

The Company owns or has other rights in various forms of intellectual property (i.e., patents, trademarks, service marks, copyrights, mask works, trade secrets and other items). As a major supplier of engineered products to industrial and commercial markets, the Company emphasizes developing intellectual property and protecting its rights therein. However, the scope of protection afforded by intellectual property rights, including those of the Company, is often uncertain and involves complex legal and factual issues. Some intellectual property rights, such as patents, have only a limited term. Also, there can be no assurance that third parties will not infringe or design around the Company's intellectual property. Policing unauthorized use of intellectual property is difficult, and infringement and misappropriation are persistent problems for many companies, particularly in some international markets. In addition, the Company may not elect to pursue an unauthorized user due to the high costs and uncertainties associated with litigation. Further, there can be no assurance that courts will ultimately hold issued patents or other intellectual property valid and enforceable. See Item 1A, "Risk Factors."



A number of products in the Filtration segment are based on patented or otherwise proprietary technology that sets them apart from the competition, such as VACCO's proprietary quieting technology, Westland's signature reduction solutions, and Mayday's and Hi-Tech's business solutions software.

In the Test segment, patent protection has been sought for significant inventions. Examples of such inventions include novel designs for window and door assemblies used in shielded enclosures and anechoic chambers, improved acoustic techniques for sound isolation and a variety of unique antennas. In addition, the Test segment holds a number of patents, and has patents pending, on products used to perform wireless device testing.

In the USG segment, the segment policy is to seek patent and/or other forms of intellectual property protection on new and improved products, components of products and methods of operation for its businesses, as such developments are made. Doble is pursuing patent protection on improvements to its line of diagnostic equipment and NERC CIP compliance tools. Doble also holds an extensive library of apparatus performance information useful to Doble employees and to entities that generate, distribute or consume electric energy. Doble makes part of this library available to registered users via an Internet portal. NRG is pursuing patent protection on its upcoming line of bat deterrent systems, which are expected to reduce bat mortality at windfarms.

The Technical Packaging segment emphasizes advanced manufacturing technology and methods. For example, the TEQ 3-in-1 tooling system, with an added stacking tool, provides a competitive edge over traditional thermoform tooling; and Plastique's "Cure-In-The-Mold" technology produces high-quality, smooth-surface, thin-wall packaging products which may be made from sustainable virgin crop fibers or virgin pulp. The segment's intellectual property consists chiefly of trade secrets and proprietary technology embodied in products for which the Company is the only approved source, such as the TEQconnex™ and TEQethylene™ single polymer sterile barrier medical packaging systems for which TEQ owns the validation studies required to register the package with the FDA.

The Company considers its patents and other intellectual property to be of significant value in each of its segments.

## **Backlog**

Total Company backlog of firm orders at September 30, 2017 was \$377.1 million, representing an increase of \$50.9 million (16%) from the backlog of \$326.2 million on September 30, 2016. The backlog at September 30, 2017 and September 30, 2016, respectively, by segment, was: \$203.1 million and \$195.8 million for Filtration; \$114.8 million and \$77.0 million for Test; \$35.6 million and \$33.7 million for USG; and \$23.6 million and \$19.7 million for Technical Packaging. The Company estimates that as of September 30, 2017 domestic customers accounted for approximately 73% of the Company's total firm orders and international customers accounted for approximately 27%. Of the total Company backlog at September 30, 2017, approximately 79% is expected to be completed in the fiscal year ending September 30, 2018.

## **Purchased Components and Raw Materials**

The Company's products require a wide variety of components and materials. Although the Company has multiple sources of supply for most of its materials requirements, certain components and raw materials are supplied by sole source vendors, and the Company's ability to perform certain contracts depends on their performance. In the past, these required raw materials and various purchased components generally have been available in sufficient quantities. However, the Company does have some risk of shortages of materials or components due to reliance on sole or limited sources of supply. See Item 1A, "Risk Factors."

The Filtration segment purchases supplies from a wide array of vendors. In most instances, multiple vendors of raw materials are screened during a qualification process to ensure that there will not be an interruption of supply should one of them underperform or discontinue operations. Nonetheless, in some situations, there is a risk of shortages due to reliance on a limited number of suppliers or because of price fluctuations due to the nature of the raw materials. For example, aerospace-grade titanium and gaseous helium, important raw materials for our Filtration segment subsidiaries, may at times be in short supply.

The Test segment is a vertically integrated supplier of electro-magnetic (EM) shielding and RF absorbing products, producing most of its critical RF components. This segment purchases significant quantities of raw materials such as polyurethane foam, polystyrene beads, steel, aluminum, copper, nickel and wood. Accordingly, it is subject to price fluctuations in the worldwide raw materials markets, although ETS-Lindgren has long-term contracts with a number of its suppliers of certain raw materials.

The USG segment manufactures electronic instrumentation through a network of regional contract manufacturers under long term contracts. In general, USG purchases the same kinds of component parts as do other electronic

products manufacturers, and purchases only a limited amount of raw materials.

The Technical Packaging segment selects suppliers initially on the basis of their ability to meet requirements, and then conducts ongoing evaluations and ratings of the supplier's performance based on a documented evaluation process. The segment purchases raw materials according to a documented and controlled process assuring that purchased materials meet defined specifications. Thermoplastics represent the largest percentage of raw material spend, with purchase prices subject to fluctuation depending on petrochemical industry pricing and capacity in the plastic resin market.

## **Competition**

Competition in the Company's major markets is broadly based and global in scope. Competition can be particularly intense during periods of economic slowdown, and this has been experienced in some of our markets. Although the Company is a leading supplier in several of the markets it serves, it maintains a relatively small share of the business in many of the other markets it serves. Individual competitors range in size from annual revenues of less than \$1 million to billion-dollar enterprises. Because of the specialized nature of the Company's products, its competitive position with respect to its products cannot be precisely stated. In the Company's major served markets, competition is driven primarily by quality, technology, price and delivery performance. See also Item 1A, "Risk Factors."

Primary competitors of the Filtration segment include Pall Corporation, Moog, Inc., Sofrance, CLARCOR Inc., PneuDraulics, Marotta Controls and Parker Hannifin.

The Test segment is a global leader in EM shielding. Significant competitors in this market include Rohde & Schwarz GMBH, Microwave Vision SA (MVG), TDK RF Solutions Inc., Albatross GmbH, IMEDCO AG and Cuming Microwave Corporation.

Significant competitors of the USG segment include OMICRON electronics Corp., Megger Group Limited, Vaisala and Qualitrol Company LLC (a subsidiary of Danaher Corporation).

Significant Competitors of the Technical Packaging segment include Nelipak Corporation, Prent Corporation, Placon Corporation and Sonoco /Alloyd.

### **Research and Development**

Research and development and the Company's technological expertise are important factors in the Company's business. Research and development programs are designed to develop technology for new products or to extend or upgrade the capability of existing products, and to enhance their commercial potential. The Company performs research and development at its own expense, and also engages in research and development funded by customers.

Total Company-sponsored research and development expenses were approximately \$15.5 million, \$12.9 million and \$16.7 million for 2017, 2016 and 2015, respectively. In addition, the Company spent approximately \$8.3 million, \$7.0 million and \$6.8 million on customer-sponsored research and development in 2017, 2016 and 2015, respectively, all of which was fully or substantially reimbursed. These amounts exclude certain engineering costs primarily associated with product line extensions, modifications and maintenance, which amounted to approximately \$10.4 million, \$8.2 million and \$8.2 million for 2017, 2016 and 2015, respectively.

### **Environmental Matters**

The Company is involved in various stages of investigation and cleanup relating to environmental matters. It is very difficult to estimate the potential costs of such matters and the possible impact of these costs on the Company at this time due in part to: the uncertainty regarding the extent of pollution; the complexity and changing nature of Government laws and regulations and their interpretations; the varying costs and effectiveness of alternative cleanup technologies and methods; the uncertain level of insurance or other types of cost recovery; the uncertain level of the Company's responsibility for any contamination; the possibility of joint and several liability with other contributors under applicable law; and the ability of other contributors to make required contributions toward cleanup costs. Based on information currently available, the Company does not believe that the aggregate costs involved in the resolution of any of its environmental matters will have a material adverse effect on the Company's financial condition or results of operations.

## **Government Contracts**

The Company contracts with the U.S. Government and subcontracts with prime contractors of the U.S. Government. Although VACCO and Westland have a number of “cost-plus” Government contracts, the Company’s Government contracts also include firm fixed-price contracts under which work is performed and paid for at a fixed amount without adjustment for the actual costs experienced in connection with the contracts. All Government prime contracts and virtually all of the Company’s Government subcontracts provide that they may be terminated at the convenience of the Government or the customer. Upon such termination, the Company is normally entitled to receive equitable compensation from the customer. See “Marketing and Sales” in this Item 1, and Item 1A, “Risk Factors,” for additional information regarding Government contracts and related risks.

## **Discontinued Operations**

During 2014, the Company sold that portion of the Company’s USG segment represented by Aclara Technologies LLC and two related entities (together, Aclara), a leading supplier of data communications systems and related software used by electric, gas and water utilities in support of their advanced metering infrastructure deployments, typically encompassing the utility’s entire service area. Aclara’s largest contracts, such as those with Pacific Gas & Electric Company and Southern California Gas Co., each involve several million end points. However, the purchase price was not finally determined until 2015. Prior to the sale Aclara constituted a component of the Company with operations and cash flows that were clearly distinguishable, operationally and for financial reporting purposes, from the rest of the entity. Accordingly, for financial reporting purposes Aclara is reflected for 2015 as discontinued operations. Unless otherwise specifically stated, all operating results presented in this report are exclusive of discontinued operations.

## **Employees**

As of September 30, 2017, the Company employed 3,254 persons, including 3,029 full time employees. Of the Company’s full-time employees, 2,352 were located in the United States and 677 were located in 17 foreign countries.

## Financing

For information about the Company's credit facility, see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations – Bank Credit Facility," and Note 8 to the Consolidated Financial Statements included herein, which are incorporated into this Item by reference.

## Additional Information

The information set forth in Item 1A, "Risk Factors," is incorporated in this Item by reference.

The Company makes available free of charge on or through its website, *www.escotechnologies.com*, its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. Information contained on the Company's website is not incorporated into this Report.

## Executive Officers of the Registrant

The following sets forth certain information as of November 1, 2017 with respect to the Company's executive officers. These officers are elected annually to terms which expire at the first meeting of the Board of Directors after the next Annual Meeting of Stockholders.

<b>Name</b>	<b>Age</b>	<b>Position(s)</b>
Victor L. Richey	60	Chairman of the Board of Directors and Chief Executive Officer since April 2003; President since October 2006 *
Gary E. Muenster	57	Executive Vice President and Chief Financial Officer since February 2008; Director since February 2011
Alyson S. Barclay	58	Senior Vice President, Secretary and General Counsel since November 2008

\* Mr. Richey also serves as Chairman of the Executive Committee of the Board of Directors.

There are no family relationships among any of the executive officers and directors.

#### Item 1A. Risk Factors

This Form 10-K, including Item 1, “Business,” Item 2, “Properties,” Item 3, “Legal Proceedings,” Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” contains “forward-looking statements” within the meaning of the safe harbor provisions of the federal securities laws, as described under “Forward-Looking Statements” above.

In addition to the risks and uncertainties discussed in that section and elsewhere in this Form 10-K, the following important risk factors could cause actual results and events to differ materially from those contained in any forward-looking statements, or could otherwise adversely affect the Company’s business, operating results or financial condition:

***Our sales of products to the Government depend upon continued Government funding.***

Sales to the U.S. Government and its prime contractors and subcontractors represent a significant portion of our business. Over the past three fiscal years, from 14% to 20% of our revenues from continuing operations have been generated from sales to the U.S. Government or its contractors, primarily within our Filtration segment. These sales are dependent on government funding of the underlying programs, which is generally subject to annual Congressional appropriations. There could be reductions or terminations of, or delays in, the government funding on programs which apply to us or our customers. These funding effects could adversely affect our sales and profit, and could bring about a restructuring of our operations, which could result in an adverse effect on our financial condition or results of operations. A significant part of VACCO’s and Westland’s sales involve major U.S. Government programs such as NASA’s Space Launch System (SLS) and the U.S. Navy’s submarine program. A reduction or delay in Government spending on these programs could have a significant adverse impact on our financial results which could extend for more than a single year.

***Negative worldwide economic conditions and related credit shortages could result in a decrease in our sales and an increase in our operating costs, which could adversely affect our business and operating results.***

If there is a worsening of global and U.S. economic and financial market conditions and additional tightening of global credit markets, many of our customers may further delay or reduce their purchases of our products. During 2016, the government of Saudi Arabia announced several austerity programs which may impact future business in that country; although their impact is still unknown it could be significant and could adversely affect future extensions of Doble's current multi-year project there involving the national power grid. Uncertainties in the global economy may cause the utility industry and commercial market customers to experience shortages in available credit, which could limit capital spending. To the extent this problem affects our customers, our sales and profits could be adversely affected. Likewise, if our suppliers face challenges in obtaining credit, they may have to increase their prices or become unable to continue to offer the products and services we use to manufacture our products, which could have an adverse effect on our business, results of operations and financial condition.

***Our quarterly results may fluctuate substantially.***

We have experienced variability in quarterly results and believe our quarterly results will continue to fluctuate as a result of many factors, including the size and timing of customer orders, governmental approvals and funding levels, changes in existing taxation rules or practices, the gain or loss of significant customers, timing and levels of new product developments, shifts in product or sales channel mix, increased competition and pricing pressure, and general economic conditions.

***A significant part of our manufacturing operations depends on a small number of third-party suppliers.***

A significant part of our manufacturing operations relies on a small number of third-party manufacturers to supply component parts or products. For example, Doble has arrangements with four manufacturers which produce and supply substantially all of its end-products. One of these suppliers produces more than 50% of Doble's products from a single location within the United States. A significant disruption in the supply of those products could negatively affect the timely delivery of products to customers as well as future sales, which could increase costs and reduce margins.

Certain of our other businesses are dependent upon sole source or a limited number of third-party manufacturers of parts and components. Many of these suppliers are small businesses. Since alternative supply sources are limited, there is an increased risk of adverse impacts on our production schedules and profits if our suppliers were to default in fulfilling their price, quality or delivery obligations. In addition, some of our customers or potential customers may



prefer to purchase from a supplier which does not have such a limited number of sources of supply.

***Increases in prices of raw material and components, and decreased availability of such items, could adversely affect our business.***

The cost of raw materials and product components is a major element of the total cost of many of our products. For example, our Test segment's critical components rely on purchases of raw materials from third parties. Increases in the prices of raw materials (such as steel, copper, nickel, zinc, wood and petrochemical products) could have an adverse impact on our business by, among other things, increasing costs and reducing margins. Aerospace-grade titanium and gaseous helium, important raw materials for our Filtration segment, may at times be in short supply. Further, many of Doble's items of equipment which are provided to its customers for their use are in the maturity of their life cycles, which creates the risk that replacement components may be unavailable or available only at increased costs.

In addition, our reliance on sole or limited sources of supply of raw materials and components in each of our segments could adversely affect our business, as described in the preceding Risk Factor. Weather-created disruptions in supply, in addition to affecting costs, could impact our ability to procure an adequate supply of these raw materials and components, and delay or prevent deliveries of products to our customers.

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

We have significant manufacturing and sales activities in foreign countries, and our domestic operations have sales to foreign customers. Our financial results may be affected by fluctuations in foreign currencies and by the translation of the financial statements of our foreign subsidiaries from local currencies into U.S. dollars. In addition, a rise in the dollar against foreign currencies could make our products more expensive for foreign customers and cause them to reduce the volume of their purchases.

***Failure or delay in new product development could reduce our future sales.***

Much of our business is dependent on the continuous development of new products and technologies to meet the changing needs of our markets on a cost-effective basis. Many of these markets are highly technical from an engineering standpoint, and the relevant technologies are subject to rapid change. If we fail to timely enhance existing products or develop new products as needed to meet market or competitive demands, we could lose sales opportunities, which would adversely affect our business. In addition, in some existing contracts with customers, we have made commitments to develop and deliver new products. If we fail to meet these commitments, the default could result in the imposition on us of contractual penalties including termination. Our inability to enhance existing products in a timely manner could make our products less competitive, while our inability to successfully develop new products may limit our growth opportunities. Development of new products and product enhancements may also require us to make greater investments in research and development than we now do, and the increased costs associated with new product development and product enhancements could adversely affect our operating results. In addition, our costs of new product development may not be recoverable if demand for our products is not as great as we anticipate it to be.

***Changes in testing standards could adversely impact our Test and USG segments' sales.***

A significant portion of the business of our Test and USG segments involves sales to technology customers who need to have a third party verify that their products meet specific international and domestic test standards. If regulatory agencies were to eliminate or reduce certain domestic or international test standards, or if demand for product testing from these customers were to decrease for some other reason, our sales could be adversely affected. For example, if Wi-Fi technology in mobile phones were to be superseded by a new communications technology, then there might be no need for certain testing on mobile phones; or if a regulatory authority were to relax the test standards for certain electronic devices because they were determined not to interfere with the broadcast spectrum, our sales of certain testing products could be significantly reduced.

***The end of customer product life cycles could negatively affect our Filtration segment's results.***

Many of our Filtration segment products are sold to be components in our customers' end-products. If a customer discontinues a certain end-product line, our ability to continue to sell those components will be reduced or eliminated. The result could be a significant decrease in our sales. For example, a substantial portion of PTI's revenue is generated from commercial aviation aftermarket sales. As certain aircraft are retired and replaced by newer aircraft, there could be a corresponding decrease in sales associated with our current products. Such a decrease could adversely affect our operating results.

***Product defects could result in costly fixes, litigation and damages.***

Our business exposes us to potential product liability risks that are inherent in the design, manufacture and sale of our products and the products of third-party vendors which we use or resell. If there are claims related to defective products (under warranty or otherwise), particularly in a product recall situation, we could be faced with significant expenses in replacing or repairing the product. For example, the Filtration segment obtains raw materials, machined parts and other product components from suppliers who provide certifications of quality which we rely on. Should these product components be defective and pass undetected into finished products, or should a finished product contain a defect, we could incur significant costs for repairs, re-work and/or removal and replacement of the defective product. In addition, if a dispute over product claims cannot be settled, arbitration or litigation may result, requiring us to incur attorneys' fees and exposing us to the potential of damage awards against us.

***We may not be able to identify suitable acquisition candidates or complete acquisitions successfully, which may inhibit our rate of growth.***

As part of our growth strategy, we plan to continue to pursue acquisitions of other companies, assets and product lines that either complement or expand our existing business. However, we may be unable to implement this strategy if we are unable to identify suitable acquisition candidates or consummate future acquisitions at acceptable prices and terms. We expect to face competition for acquisition candidates which may limit the number of acquisition opportunities available to us and may result in higher acquisition prices. As a result, we may be limited in the number of acquisitions which we are able to complete and we may face difficulties in achieving the profitability or cash flows needed to justify our investment in them.

***Our acquisitions of other companies carry risk.***

Acquisitions of other companies involve numerous risks, including difficulties in the integration of the operations, technologies and products of the acquired companies, the potential exposure to unanticipated and undisclosed liabilities, the potential that expected benefits or synergies are not realized and that operating costs increase, the potential loss of key personnel, suppliers or customers of acquired businesses and the diversion of Management's time and attention from other business concerns. Although we attempt to identify and evaluate the risks inherent in any acquisition, we may not properly ascertain or mitigate all such risks, and our failure to do so could have a material adverse effect on our business.

***We may incur significant costs, experience short term inefficiencies, or be unable to realize expected long term savings from facility consolidations and other business reorganizations.***

We periodically assess the cost and operational structure of our facilities in order to manufacture and sell our products in the most efficient manner, and based on these assessments, we may from time to time reorganize, relocate or consolidate certain of our facilities. These actions may require us to incur significant costs and may result in short term business inefficiencies as we consolidate and close facilities and transition our employees; and in addition, we may not achieve the expected long term benefits. Any or all of these factors could result in an adverse impact on our operating results, cash flows and financial condition.

***The trading price of our common stock continues to be volatile and may result in investors selling shares of our common stock at a loss.***

The trading price of our common stock is volatile and subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including those described in this section and including but not limited to: actual or anticipated variations in our quarterly operating results; changes in financial estimates by securities analysts that cover our stock or our failure to meet those estimates; substantial sales of our common stock by our existing shareholders; and general stock market conditions. In recent years the stock markets in general have experienced dramatic price and volume fluctuations, which may continue indefinitely, and changes in industry, general economic or market conditions could harm the price of our stock regardless of our operating performance.

***The Company has guaranteed certain Aclara contracts.***

In the normal course of business during the time that Aclara was our subsidiary, we agreed to provide guarantees of Aclara's performance under certain real property leases, certain vendor contracts, and certain large, long-term customer contracts for the delivery, deployment and performance of AMI systems such as those described under "Discontinued Operations" in Item 1. In connection with the sale of Aclara, we agreed to remain a guarantor of Aclara's performance of these contracts. If Aclara were to fail to perform any of these guaranteed contracts, the other party to the contract could seek damages from us resulting from the non-performance, and if we were determined to be liable for these damages they could have a material adverse effect on our business, operating results or financial condition. Although we would be entitled to seek indemnification from Aclara for these damages, our ability to recover would be subject to Aclara's financial position at that time.

***We may not realize as revenue the full amounts reflected in our backlog.***

As of September 30, 2017 our twelve-month backlog was approximately \$299 million, which represents confirmed orders we believe will be recognized as revenue within the next twelve months. There can be no assurance that our customers will purchase all the orders represented in our backlog, particularly as to contracts which are subject to the U.S. Government's ability to modify or terminate major programs or contracts, and if and to the extent that this occurs, our future revenues could be materially reduced.

***Economic, political and other risks of our international operations, including terrorist activities, could adversely affect our business.***

In 2017, approximately 27% of our net sales were to customers outside the United States. An economic downturn or an adverse change in the political situation in certain foreign countries in which we do business could cause a decline in revenues and adversely affect our financial condition. For example, our Test segment does significant business in Asia, and changes in the Asian political climate or political changes in specific Asian countries could negatively affect our business; several of our subsidiaries are based in Europe and could be negatively impacted by weakness in the European economy; Doble's and Plastique's UK-based businesses could be adversely affected by Brexit; and Doble's future business in Saudi Arabia as well as elsewhere in the Middle East could be adversely affected by government austerity programs, continuing political unrest, wars and terrorism in the region.

Our international sales are also subject to other risks inherent in foreign commerce, including currency fluctuations and devaluations, differences in foreign laws, uncertainties as to enforcement of contract rights, and difficulties in negotiating and resolving disputes with our foreign customers.

***Our governmental sales and our international and export operations are subject to special U.S. and foreign government laws and regulations which may impose significant compliance costs, create reputational and legal risk, and impair our ability to compete in international markets.***

The international scope of our operations subjects us to a complex system of commercial and trade regulations around the world, and our foreign operations are governed by laws and business practices that often differ from those of the U.S. In addition, laws such as the U.S. Foreign Corrupt Practices Act and similar laws in other countries increase the need for us to manage the risks of improper conduct not only by our own employees but by distributors and contractors who may not be within our direct control. Many of our exports are of products which are subject to U.S. Government regulations and controls such as the U.S. International Traffic in Arms Regulations (ITAR), which impose certain restrictions on the U.S. export of defense articles and services, and these restrictions are subject to change from time to time, including changes in the countries into which our products may lawfully be sold.

If we were to fail to comply with these laws and regulations we could be subject to significant fines, penalties and other sanctions including the inability to continue to export our products or to sell our products to the U.S. Government or to certain other customers. In addition, some of these regulations may be viewed as too restrictive by our international customers, who may elect to develop their own domestic products or procure products from other international suppliers which are not subject to comparable export restrictions; and the laws, regulations or policies of certain other countries may also favor their own domestic suppliers over foreign suppliers such as the Company.

***Despite our efforts, we may be unable to adequately protect our intellectual property.***

Much of our business success depends on our ability to protect and freely utilize our various intellectual properties, including both patents and trade secrets. Despite our efforts to protect our intellectual property, unauthorized parties or competitors may copy or otherwise obtain and use our products and technology, particularly in foreign countries such as China where the laws may not protect our proprietary rights as fully as in the United States. Our current and future actions to enforce our proprietary rights may ultimately not be successful; or in some cases we may not elect to pursue an unauthorized user due to the high costs and uncertainties associated with litigation. We may also face exposure to claims by others challenging our intellectual property rights. Any or all of these actions may divert our resources and cause us to incur substantial costs.

***Disputes with contractors could adversely affect our Test segment's results.***

A major portion of our Test segment's business involves working in conjunction with general contractors to produce complex building components constructed on-site, such as electronic test chambers, secure communication rooms and MRI facilities. If there are performance problems caused by either us or a contractor, they could result in cost overruns and may lead to a dispute as to which party is responsible. The resolution of such disputes can involve arbitration or litigation, and can cause us to incur significant expense including attorneys' fees. In addition, these disputes could result in a reduction in revenue, a loss on a particular project, or even a significant damages award against us.

***Environmental or regulatory requirements could increase our expenses and adversely affect our profitability.***

Our operations and properties are subject to U.S. and foreign environmental laws and regulations governing, among other things, the generation, storage, emission, discharge, transportation, treatment and disposal of hazardous materials and the clean-up of contaminated properties. These regulations, and changes to them, could increase our cost of compliance, and our failure to comply could result in the imposition of significant fines, suspension of production, alteration of product processes, cessation of operations or other actions which could materially and adversely affect our business, financial condition and results of operations.

We are currently involved as a responsible party in several ongoing investigations and remediations of contaminated third-party owned properties. In addition, environmental contamination may be discovered in the future on properties which we formerly owned or operated and for which we could be legally responsible. Future costs associated with these situations, including ones which may be currently unknown to us, are difficult to quantify but could have a significant effect on our financial condition. See Item 1, "Business – Environmental Matters" for a discussion of these factors.

***We are or may become subject to legal proceedings that could adversely impact our operating results.***

We are, and will likely be in the future, a party to a number of legal proceedings and claims involving a variety of matters, including environmental matters such as those described in the preceding risk factor and disputes over the ownership or use of intellectual property. Given the uncertainties inherent in litigation, including but not limited to the possible discovery of facts adverse to our position, adverse rulings by a court or adverse decisions by a jury, it is possible that such proceedings could result in a liability that we may have not adequately reserved for, that may not be adequately covered by insurance, or that may otherwise have a material adverse effect on our financial condition or results of operations.

***The loss of specialized key employees could affect our performance and revenues.***

There is a risk of our losing key employees having engineering and technical expertise to other employers. For example, our USG segment relies heavily on engineers with significant experience and reputation in the utility industry to furnish expert consulting services and support to customers. There is a current trend of a shortage of these qualified engineers because of hiring competition from other companies in the industry. Loss of these employees to other employers could reduce the segment's ability to provide services and negatively affect our revenues.

***Our decentralized organizational structure presents certain risks.***

We are a relatively decentralized company in comparison with some of our peers. This decentralization necessarily places significant control and decision-making powers in the hands of local management, which present various risks, including the risk that we may be slower or less able to identify or react to problems affecting a key business than we would in a more centralized management environment. We may also be slower to detect or react to compliance related problems (such as an employee undertaking activities prohibited by applicable law or by our internal policies), and Company-wide business initiatives may be more challenging and costly to implement, and the risks of noncompliance or failures higher, than they would be under a more centralized management structure. Depending on the nature of the problem or initiative in question, such noncompliance or failure could materially adversely affect our business, financial condition or result of operations.

***Provisions in our articles of incorporation, bylaws and Missouri law could make it more difficult for a third party to acquire us and could discourage acquisition bids or a change of control, and could adversely affect the market price of our common stock.***



Our articles of incorporation and bylaws contain certain provisions which could discourage potential hostile takeover attempts, including: a limitation on the shareholders' ability to call special meetings of shareholders; advance notice requirements to nominate candidates for election as directors or to propose matters for action at a meeting of shareholders; a classified board of directors, which means that approximately one-third of our directors are elected each year; and the authority of our board of directors to issue, without shareholder approval, preferred stock with such terms as the board may determine. In addition, the laws of Missouri, in which we are incorporated, require a two-thirds vote of outstanding shares to approve mergers or certain other major corporate transactions, rather than a simple majority as in some other states such as Delaware. These provisions could impede a merger or other change of control not approved by our board of directors, which could discourage takeover attempts and in some circumstances reduce the market price of our common stock.

Item 1B. Unresolved Staff Comments

None

## Item 2. Properties

The Company believes its buildings, machinery and equipment have been generally well maintained, are in good operating condition and are adequate for the Company's current production requirements and other needs.

The Company's principal manufacturing facilities and other materially important properties, including those described in the table below, comprise approximately 1,644,000 square feet of floor space, of which approximately 888,000 square feet are owned and approximately 756,000 square feet are leased. Leased facilities of less than 10,000 square feet are not included in the table. See also Notes 14 and 15 to the Consolidated Financial Statements included herein.

<b>Location</b>	<b>Approx. Sq. Ft.</b>	<b>Owned / Leased (with Expiration Date)</b>	<b>Principal Use(s)</b>	<b>Operating Segment</b>
Modesto, CA	181,500	Leased (9/30/2023)	Manufacturing, Office, Engineering	Filtration
Denton, TX	145,000	Leased (9/30/2029, plus options)	Manufacturing, Warehouse, Office, Engineering	Filtration
Cedar Park, TX	130,000	Owned	Manufacturing, Warehouse, Office, Engineering	Test
Oxnard, CA	127,400	Owned	Manufacturing, Warehouse, Office, Engineering	Filtration
South El Monte, CA	100,100	Owned	Manufacturing, Warehouse, Office, Engineering	Filtration
Durant, OK	100,000	Owned	Manufacturing, Warehouse, Office, Engineering	Test
Huntley, IL	86,000	Owned	Manufacturing, Warehouse, Office, Engineering	Technical Packaging
Watertown, MA	82,100	Owned	Manufacturing, Office, Engineering	USG
Valencia, CA	79,300	Owned	Manufacturing, Office, Engineering	Filtration
Hinesburg, VT	77,000	Leased (5/31/2029)	Manufacturing, Warehouse, Office, Engineering	USG
South El Monte, CA	64,200	Leased (6/30/2019 & 6/30/2022)	Manufacturing, Warehouse, Office	Filtration

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Eura, Finland	41,500	Owned	Manufacturing, Warehouse, Office, Engineering	Test
Fremont, IN	39,800	Owned	Manufacturing, Warehouse, Office, Engineering	Technical Packaging
Beijing, China	33,300	Leased (12/31/2019)	Manufacturing, Engineering	Test
Minocqua, WI	35,400	Owned	Manufacturing, Office, Engineering	Test
LaSalle (Montreal), Quebec	35,200	Leased (8/31/2021)	Manufacturing, Office, Engineering	USG
Dabrowa, Poland	34,000	Owned	Manufacturing, Office, Engineering	Technical Packaging
Poznan, Poland	32,000	Owned	Manufacturing, Office, Engineering	Technical Packaging
Ontario, CA	26,900	Leased (8/29/2020)	Manufacturing, Office, Engineering	USG
Nottingham, England	23,900	Leased (7/31/2019)	Manufacturing, Office, Engineering	Technical Packaging
St. Louis, MO	21,500	Leased (8/31/2020 plus options)	ESCO Corporate Office	Corporate
Tunbridge Wells, England	14,400	Leased (7/31/2019)	Manufacturing, Office	Technical Packaging
Morrisville, NC	11,600	Leased (8/31/2019)	Office, Manufacturing	USG
Huntley, IL	11,500	Leased (12/31/2018)	Manufacturing	Filtration
Marlborough, MA	11,200	Leased (6/30/2020)	Office, Engineering	USG
Wood Dale, IL	10,700	Leased (3/31/2019)	Office	Test

### Item 3. Legal Proceedings

As a normal incident of the businesses in which the Company is engaged, various claims, charges and litigation are asserted or commenced from time to time against the Company. With respect to claims and litigation currently asserted or commenced against the Company, it is the opinion of Management that final judgments, if any, which might be rendered against the Company are adequately reserved for, are covered by insurance, or are not likely to have a material adverse effect on the Company's financial condition or results of operations. Nevertheless, given the uncertainties of litigation, it is possible that such claims, charges and litigation could have a material adverse impact on the Company; see Item 1A, "Risk Factors."

### 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

**Price Range Of Common Stock.** The Company's common stock is listed on the New York Stock Exchange under the symbol "ESE." The following table summarizes the high and low prices of the common stock for each quarter in the last two fiscal years.

	2017		2016	
Quarter	High	Low	High	Low
First	\$58.75	42.95	\$39.98	33.62
Second	58.95	51.80	39.59	31.50
Third	61.40	55.15	41.68	37.19
Fourth	63.80	50.30	47.39	39.14

**Holders of Record.** As of October 31, 2017 there were approximately 1,829 holders of record of the Company's common stock.

**Dividends.** For information about dividends paid on the common stock in the last two fiscal years, please refer to Note 16 to the Company's Consolidated Financial Statements included herein.

**Company Purchases of Equity Securities.** The Company did not repurchase any shares of its common stock during the fourth quarter of fiscal 2017.

**Securities Authorized for Issuance Under Equity Compensation Plans.** For information about securities authorized for issuance under the Company's equity compensation plans, please refer to Item 12 of this Form 10-K and to Note 10 to the Company's Consolidated Financial Statements included herein.

**Performance Graph.** The graph and table below present a comparison of the cumulative total shareholder return on the Company's common stock as measured against the Russell 2000 index and two customized peer groups whose individual component companies are listed below. Because the Company changed the composition of the peer group for 2017, as described below, the peer group used for the corresponding disclosures in 2016 is also shown for comparison. The Company is not a component of either the 2017 peer group or the 2016 peer group, but it is a component of the Russell 2000 Index. The measurement period begins on September 30, 2012 and measures at each September 30 thereafter. These figures assume that all dividends, if any, paid over the measurement period were reinvested, and that the starting values of each index and the investments in the Company's common stock were \$100 at the close of trading on September 30, 2012.

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN**

Among ESCO Technologies Inc., the Russell 2000 Index,  
2016 Peer Group and 2017 Peer Group

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	9/30/12	9/30/13	9/30/14	9/30/15	9/30/16	9/30/17
ESCO Technologies Inc.	\$ 100.00	\$ 86.27	\$ 91.35	\$ 95.11	\$ 123.96	\$ 160.75
Russell 2000	100.00	130.06	135.17	136.85	158.02	190.80
2017 Peer Group	100.00	114.84	122.10	94.19	111.93	128.84
2016 Peer Group	100.00	115.84	121.34	93.13	110.99	129.60

The 2017 peer group was composed of ten companies that corresponded to the Company's four industry segments used for financial reporting purposes during 2017, as follows: Filtration/Fluid Flow segment (41% of the Company's 2017 total revenue): CIRCOR International, Inc., Donaldson Company, Inc. and Moog Inc.; Test segment (23% of the Company's 2017 total revenue): EXFO Inc. and FARO Technologies, Inc.; USG segment (24% of the Company's 2017 total revenue): Aegion Corporation, Ameresco, Inc. and Thermon Group Holdings, Inc.; and Technical Packaging Segment (12% of the Company's 2017 total revenue): AptarGroup, Inc. and Bemis Company, Inc.

The 2016 peer group was originally composed of eleven companies that corresponded to the Company's four industry segments used for financial reporting purposes during 2016, as follows: Filtration/Fluid Flow segment (36% of the Company's 2016 total revenue): CIRCOR International, Inc., CLARCOR Inc., Donaldson Company, Inc. and Moog Inc.; Test segment (28% of the Company's 2016 total revenue): EXFO Inc. and FARO Technologies, Inc.; USG segment (23% of the Company's 2016 total revenue): Aegion Corporation, Ameresco, Inc. and EnerNOC, Inc.; and Technical Packaging Segment (13% of the Company's 2016 total revenue): AptarGroup, Inc. and Bemis Company, Inc. However, because two of the companies, CLARCOR Inc. and EnerNOC, Inc., were acquired during 2017, these two companies are not included in the total return calculations above.

In calculating the composite return of the 2016 and 2017 peer groups, the return of each company comprising the peer group was weighted by (a) its market capitalization in relation to the other companies in its corresponding Company industry segment, and (b) the percentage of the Company's total revenue represented by its corresponding Company industry segment.





**Item 6. Selected Financial Data**

The following selected consolidated financial data of the Company and its subsidiaries should be read in conjunction with the Company's Consolidated Financial Statements, the Notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations, as of the respective dates indicated and for the respective periods ended thereon.

(Dollars in millions, except per share amounts)	2017	2016	2015	2014	2013
For years ended September 30:					
Net sales	\$685.7	571.5	537.3	531.1	490.1
Net earnings from continuing operations	53.7	45.9	41.7	42.6	31.3
Net earnings (loss) from discontinued operations	-	-	0.8	(42.2)	(56.9)
Net earnings (loss)	53.7	45.9	42.5	0.4	(25.6)
Earnings (loss) per share:					
Basic:					
Continuing operations	\$2.08	1.78	1.60	1.61	1.18
Discontinued operations	-	-	0.03	(1.60)	(2.15)
Net earnings (loss)	\$2.08	1.78	1.63	0.01	(0.97)
Diluted:					
Continuing operations	\$2.07	1.77	1.59	1.60	1.17
Discontinued operations	-	-	0.03	(1.58)	(2.13)
Net earnings (loss)	\$2.07	1.77	1.62	0.02	(0.96)
As of September 30:					
Working capital	\$197.8	165.4	155.0	148.9	163.6
Total assets	1,260.4	978.4	864.2	845.9	1,092.3
Total debt	275.0	110.0	50.0	40.0	172.0
Shareholders' equity	671.9	615.1	584.2	580.2	601.7
Cash dividends declared per common share	\$0.32	0.32	0.32	0.32	0.32

See also Note 2 to the Consolidated Financial Statements included herein for discussion of acquisition activity.

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

The following discussion should be read in conjunction with the Consolidated Financial Statements included herein and Notes thereto and refers to the Company's results from continuing operations, except where noted.

### Introduction

ESCO Technologies Inc. and its wholly owned subsidiaries (the Company) are organized into four operating segments for financial reporting purposes: Filtration/Fluid Flow (Filtration), RF Shielding and Test (Test), Utility Solutions Group (USG), and Technical Packaging. The Company's business segments are comprised of the following primary operating entities:

Filtration: PTI Technologies Inc. (PTI); VACCO Industries (VACCO); Crissair, Inc. (Crissair); Westland Technologies, Inc. (Westland); and Mayday Manufacturing Co. (Mayday) and its affiliate Hi-Tech Metals, Inc. (Hi-Tech).

Test: ETS-Lindgren Inc. (ETS-Lindgren).

USG: Doble Engineering Company (Doble); Morgan Schaffer Ltd. (Morgan Schaffer); and NRG Systems, Inc. (NRG).

Technical Packaging: Thermoform Engineered Quality LLC (TEQ); Plastique Limited and Plastique Sp. z o.o. (together, Plastique).

**Filtration.** PTI, VACCO and Crissair primarily design and manufacture specialty filtration products including hydraulic filter elements and fluid control devices used in commercial aerospace applications, unique filter mechanisms used in micro-propulsion devices for satellites and custom designed filters for manned aircraft and submarines. Westland designs, develops and manufactures elastomeric-based signature reduction solutions for U.S. naval vessels. Mayday designs and manufactures mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls, and actuation systems for the aerospace and defense industries. Hi-Tech is a full-service metal processor serving aerospace suppliers.

**Test.** ETS-Lindgren is an industry leader in providing its customers with the ability to identify, measure and contain magnetic, electromagnetic and acoustic energy.

**USG.** Doble provides high-end, intelligent diagnostic test solutions for the electric power delivery industry and is a leading supplier of power factor and partial discharge testing instruments used to assess the integrity of high-voltage power delivery equipment. Morgan Schaffer provides an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers. NRG designs and manufactures decision support tools for the renewable energy industry, primarily wind.

**Technical Packaging.** The companies within this segment provide innovative solutions to the medical and commercial markets for thermoformed and precision molded pulp fiber packages and specialty products using a wide variety of thin gauge plastics and pulp.

The Company continues to operate with meaningful growth prospects in its primary served markets and with considerable financial flexibility. The Company continues to focus on new products that incorporate proprietary design and process technologies. Management is committed to delivering shareholder value through organic growth, ongoing performance improvement initiatives, and acquisitions.

### **Highlights of 2017 Operations**

Sales, net earnings and diluted earnings per share in 2017 were \$685.7 million, \$53.7 million and \$2.07 per share, respectively, compared to sales, net earnings and diluted earnings per share in 2016 of \$571.5 million, \$45.9 million and \$1.77 per share, respectively.

Diluted EPS – As Adjusted for 2017 was \$2.22 and excludes \$6.1 million of pretax charges (or \$0.15 per share after tax) consisting of non-cash purchase accounting inventory step-up charges and costs incurred to complete the Company's 2017 acquisitions, described below. Diluted EPS – As Adjusted for 2016 was \$2.03 and excludes \$7.8 million of pretax charges (or \$0.26 per share after tax) of restructuring charges related to the 2016 Test and Doble restructuring actions.

Net cash provided by operating activities was approximately \$67.3 million in 2017 compared to \$73.9 million in 2016, mainly due to an increase in working capital.

At September 30, 2017, cash on hand was \$45.5 million and outstanding debt was \$275 million, for a net debt position (total debt less net cash) of approximately \$229.5 million.

Entered orders for 2017 were \$736.6 million resulting in a book-to-bill ratio of 1.07x. Backlog at September 30, 2017 was \$377.1 million compared to \$326.2 million at September 30, 2016.

In August 2017, the Company acquired the assets of Vanguard Instruments Company (Vanguard Instruments), a test equipment provider serving the global electric utility market, located in Ontario, California, for a purchase price of \$36.0 million in cash. Since the date of acquisition, the operating results for Vanguard Instruments have been included as a product line of Doble within the Company's USG segment.

In May 2017, the Company acquired the assets of Morgan Schaffer Inc. (Morgan Schaffer), a global utilities provider located in Montreal, Quebec, Canada for a purchase price of \$48.8 million in cash. Morgan Schaffer manufactures an integrated offering of dissolved gas analysis, oil testing, and data management solutions serving the electric utility market. Since the date of acquisition, the operating results for Morgan Schaffer have been included in the Company's USG segment.

In May 2017, the Company acquired NRG Systems, Inc. (NRG), located in Hinesburg, Vermont, for a purchase price of \$38.6 million in cash. NRG is a market leader in the design and manufacture of decision support tools for the renewable energy industry, primarily wind. Since the date of acquisition, the operating results for NRG have been included in the Company's USG segment.

In November 2016, the Company acquired aerospace suppliers Mayday Manufacturing Co. (Mayday) and its affiliate, Hi-Tech Metals, Inc. (Hi-Tech), located in Denton, Texas, for a purchase price of approximately \$75 million in cash. Mayday is a manufacturer of bushings, pins, sleeves and precision-tolerance machined components for the aerospace and defense industry. Since the date of acquisition, the operating results for Mayday and Hi-Tech have been included in the Company's Filtration segment.

- The Company declared dividends of \$0.32 per share during 2017, totaling \$8.3 million in dividend payments.

## Results of Operations

### *Net Sales*

(Dollars in millions)	Fiscal year ended			Change		Change	
	2017	2016	2015	2017	2016	2017	2016
				vs. 2016		vs. 2015	
Filtration	\$279.5	207.8	196.7	34.5	%	5.6	%
Test	160.9	161.5	177.6	(0.4)	)%	(9.1)	)%
USG	162.4	127.8	123.6	27.1	%	3.4	%
Technical Packaging	82.9	74.4	39.4	11.4	%	88.8	%
Total	\$685.7	571.5	537.3	20.0	%	6.4	%

Net sales increased \$114.2 million, or 20.0%, to \$685.7 million in 2017 from \$571.5 million in 2016. The increase in net sales in 2017 as compared to 2016 was due to a \$71.7 million increase in the Filtration segment, a \$34.6 million increase in the USG segment and an \$8.5 million increase in the Technical Packaging segment, partially offset by a \$0.6 million decrease in the Test segment.

Net sales increased \$34.2 million, or 6.4%, to \$571.5 million in 2016 from \$537.3 million in 2015. The increase in net sales in 2016 as compared to 2015 was due to a \$35.0 million increase in the Technical Packaging segment, an \$11.1 million increase in the Filtration segment and a \$4.2 million increase in the USG segment, partially offset by a \$16.1 million decrease in the Test segment.

### Filtration.

The \$71.7 million, or 34.5% increase in net sales in 2017 as compared to 2016 was primarily driven by the Company's recent acquisitions of Westland and Mayday, described under "Acquisitions" below, which contributed \$21.0 million and \$40.0 million, respectively; and a \$12.4 million increase at VACCO due to higher shipments of its defense products including Navy spares, partially offset by a \$2.4 million decrease in sales at Crissair due to lower aerospace shipments.

The \$11.1 million, or 5.6%, increase in net sales in 2016 as compared to 2015 was primarily due to a \$4.6 million increase in net sales from Crissair due to higher aerospace shipments, a \$2.5 million increase in net sales from PTI due to higher shipments of aero assemblies and elements, a \$1.4 million increase in net sales from VACCO due to higher shipments of its Space products and a \$2.5 million sales contribution from Westland (acquired on September 2, 2016).

Test.

The net sales decrease of \$0.6 million in 2017 as compared to 2016 was mainly due to a \$6.4 million decrease in net sales from the Company's European operations due to the 2016 restructuring activities to close the Test business operating facilities in Germany and England, offset by a \$7.5 million increase in net sales from its U.S. operations related to higher sales volumes of chamber projects.

The net sales decrease of \$16.1 million, or 9.1%, in 2016 as compared to 2015 was mainly due to a \$12 million decrease in net sales from the segment's European operations due to the 2016 restructuring activities mentioned above and a \$10 million decrease in net sales from the segment's U.S. operations driven by a decrease in acoustic projects, partially offset by a \$6 million increase in net sales from the segment's Asian operations driven by timing of projects.

USG.

The net sales increase of \$34.6 million, or 27.1% in 2017 as compared to 2016 was mainly driven by the Company's 2017 acquisitions of NRG and Morgan Schaffer, described under "Acquisitions" below, which contributed \$16.2 million and \$6.5 million, respectively; and an \$11.9 million increase in net sales at Doble from new products and software solutions.

The net sales increase of \$4.2 million, or 3.4%, in 2016 as compared to 2015 was driven by additional software and service revenue at Doble and the sales contribution from the Enoserv acquisition (acquired January 2015).

*Technical Packaging.*

The \$8.5 million, or 11.4%, increase in net sales in 2017 as compared to 2016 was mainly due to the \$9.3 million increase in sales contribution from Plastique which was acquired in January 2016 partially offset by a \$0.8 million decrease in net sales from TEQ due to lower shipments to medical customers.

The \$35.0 million, or 88.8%, increase in net sales in 2016 as compared to 2015 was primarily driven by the 2016 acquisitions of Plastique and Fremont, which contributed \$22 million and \$7 million, respectively, to 2016 sales and an increase in shipments to commercial customers.

*Orders and Backlog*

New orders received in 2017 were \$736.6 million as compared to \$570.2 million in 2016, resulting in order backlog of \$377.1 million at September 30, 2017 as compared to order backlog of \$326.2 million at September 30, 2016. Orders are entered into backlog as firm purchase order commitments are received.

In 2017, the Company recorded \$286.8 million of orders related to Filtration products, \$198.6 million of orders related to Test products, \$164.3 million of orders related to USG products and \$86.9 million of orders related to Technical Packaging products. In 2016, the Company recorded \$224.7 million of orders related to Filtration products, \$143.4 million of orders related to Test products, \$125.3 million of orders related to USG products and \$76.8 million of orders related to Technical Packaging products.

*Selling, General and Administrative Expenses*

Selling, general and administrative (SG&A) expenses were \$148.4 million, or 21.6% of net sales, in 2017; \$131.5 million, or 23.0% of net sales, in 2016; and \$130.2 million, or 24.2% of net sales, in 2015.

The increase in SG&A expenses in 2017 as compared to 2016 was mainly due to an increase in SG&A expenses both within the Filtration segment (due to the acquisitions of Mayday and Westland, which contributed \$9.3 million to the increase) and the USG segment (due to the acquisitions of NRG and Morgan Schaffer, which contributed \$6.9 million to the increase, as well as additional sales and marketing expenses at Doble), partially offset by a decrease in SG&A expenses in the Test segment (as a result of the 2016 restructuring activities).

The increase in SG&A expenses in 2016 as compared to 2015 was mainly due to an increase in SG&A expenses both within the Technical Packaging segment (due to the acquisitions of Plastique and Fremont) and at Corporate (higher acquisition costs, including professional fees), partially offset by a decrease in SG&A expenses within the Test and USG segments due to the facility consolidations and headcount reductions.

### ***Amortization Of Intangible Assets***

Amortization of intangible assets was \$16.3 million in 2017, \$11.6 million in 2016 and \$8.9 million in 2015. Amortization of intangible assets included \$8.6 million, \$4.9 million and \$4.0 million of amortization of acquired intangible assets in 2017, 2016 and 2015, respectively, related to the Company's acquisitions. The amortization of acquired intangible assets related to the Company's acquisitions is included in the Corporate operating segment's results. The remaining amortization expenses relate to other identifiable intangible assets (primarily software, patents and licenses), which are included in the respective segment's operating results. The increase in amortization expense in 2017 as compared to 2016 and 2015 was mainly due to the amortization of intangibles related to the Company's recent acquisitions and an increase in software amortization.

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

Other income, net, was \$0.7 million in 2017, compared to other expenses, net, of \$7.8 million in 2016 and \$1.1 million in 2015. The principal components of other income, net, in 2017 included \$0.6 million from the sale of certain intellectual property and \$0.4 million related to death benefit insurance proceeds from a former subsidiary. The principal components of other expenses, net, in 2016 included \$4.9 million of restructuring costs related to the Test segment facility consolidation and \$2.2 million of costs related to the USG segment restructuring activities. The restructuring costs mainly related to severance and compensation benefits, professional fees and asset impairment charges related to abandoned assets. The principal component of other expenses, net, in 2015 was \$0.9 million of severance expenses related to headcount reductions primarily at VACCO. There were no other individually significant items included in other expenses (income), net, in 2017, 2016 or 2015.



***Non-GAAP Financial Measures***

The information reported herein includes the financial measures EPS – As Adjusted, which the Company defines as EPS from continuing operations less defined purchase accounting inventory step-up charges and acquisition costs in 2017 and the restructuring charges related to the Test and Doble restructuring actions in 2016; EBIT, which the Company defines as earnings before interest and taxes from continuing operations, without adjustment for the defined purchase accounting inventory step-up charges, acquisition costs and restructuring charges; and EBIT margin, which the Company defines as EBIT expressed as a percentage of net sales. EPS – As Adjusted, EBIT on a consolidated basis, and EBIT margin on a consolidated basis are not recognized in accordance with U.S. generally accepted accounting principles (GAAP). However, the Company believes that EBIT and EBIT margin provide investors and Management with valuable information for assessing the Company's operating results. Management evaluates the performance of its operating segments based on EBIT and believes that EBIT is useful to investors to demonstrate the operational profitability of the Company's business segments by excluding interest and taxes, which are generally accounted for across the entire company on a consolidated basis. EBIT is also one of the measures Management uses to determine resource allocations and incentive compensation. The Company believes that the presentation of EBIT, EBIT margin and EPS – As Adjusted provides important supplemental information to investors by facilitating comparisons with other companies, many of which use similar non-GAAP financial measures to supplement their GAAP results. The use of non-GAAP financial measures is not intended to replace any measures of performance determined in accordance with GAAP.

**EBIT**

	Fiscal year ended			Change	Change		
(Dollars in millions)	2017	2016	2015	2017	2016	vs. 2016	vs. 2015
Filtration	\$52.2	45.2	41.7	15.5	%	8.4	%
% of net sales	18.7 %	21.8 %	21.2 %				
Test	19.5	13.9	9.5	40.3	%	46.3	%
% of net sales	12.1 %	8.6 %	5.3 %				
USG	36.6	31.1	29.6	17.7	%	5.1	%
% of net sales	22.5 %	24.3 %	23.9 %				
Technical Packaging	8.5	9.6	4.9	(11.5)	)%	95.9	%
% of net sales	10.3 %	12.9 %	12.4 %				
Corporate	(32.1)	(30.1)	(23.4)	6.6	%	28.6	%
Total	\$84.7	69.7	62.3	21.5	%	11.9	%
% of net sales	12.4 %	12.2 %	11.6 %				

The reconciliation of EBIT from continuing operations to a GAAP financial measure is as follows:

(Dollars in millions)	2017	2016	2015
Net earnings from continuing operations	\$53.7	45.9	41.7
Add: Interest expense	4.6	1.3	0.8
Add: Income taxes	26.4	22.5	19.8
EBIT	\$84.7	69.7	62.3

### Filtration

EBIT increased \$7.0 million in 2017 as compared to 2016 mainly due to the EBIT contribution from the Westland and Mayday acquisitions and an increase at VACCO and PTI due to increased sales volumes. EBIT as a percent of net sales decreased in 2017 compared to 2016 mainly due to the purchase accounting inventory step-up charge at Mayday of \$1.9 million in 2017 and engineering and development cost growth on certain fixed price development contracts at VACCO.

EBIT increased \$3.5 million in 2016 as compared to 2015 mainly due to the increased sales volumes at Crissair and VACCO and the EBIT contribution from the 2016 acquisition of Westland, partially offset by lower margins at PTI due to the impact of early stage production volumes.

Test

The \$5.6 million increase in EBIT in 2017 as compared to 2016 was primarily due to the \$5.1 million of restructuring charges incurred in 2016 related to closing the Test business operating facilities in Germany and England, consisting mainly of employee severance and compensation benefits, professional fees, and asset impairment charges.

The \$4.4 million increase in EBIT in 2016 as compared to 2015 was mainly due to the higher sales volumes from the segment's Asian operations and operational improvement initiatives that were partially offset by \$5.1 million of incremental restructuring charges related to closing the Test business operating facilities in Taufkirchen, Germany and Stevenage, England consisting mainly of employee severance and compensation benefits, professional fees, and asset impairment charges. In addition, 2015 EBIT was negatively impacted by incremental charges related to the write-down of certain inventories.

USG

The \$5.5 million increase in EBIT in 2017 as compared to 2016 was primarily due to higher sales volumes and additional contribution from new products and software solutions, as well as the EBIT contribution from the 2017 acquisitions of NRG, Morgan Schaffer and Vanguard Instruments. EBIT as a percent of net sales decreased in 2017 compared to 2016 mainly due to the purchase accounting inventory step-up charges at NRG, Morgan Schaffer and Vanguard Instruments totaling \$1.9 million.

The \$1.5 million increase in EBIT in 2016 as compared to 2015 was primarily due to an increase in sales volumes and the full year EBIT contribution from the 2015 acquisition of Enoserv. In addition, 2016 EBIT was negatively impacted by \$2.0 million of incremental restructuring charges incurred related to the closing of the Brazil office consisting mainly of employee severance and compensation benefits and asset write downs.

Technical Packaging

EBIT decreased \$1.1 million in 2017 as compared to 2016 mainly due to higher SG&A expenses at Plastique due to the full year being included in 2017.

EBIT increased \$4.7 million in 2016 as compared to 2015 mainly due to the acquisitions of Plastique and Fremont and the higher sales volumes to commercial and medical customers.

### Corporate

Corporate operating charges included in 2017 consolidated EBIT increased to \$32.1 million as compared to \$30.1 million in 2016 due to an increase in acquisition related expenses, mainly from increased amortization of intangible assets on recent acquisitions.

Corporate operating charges included in 2016 consolidated EBIT increased to \$30.1 million as compared to \$23.4 million in 2015 due to an increase in professional fees, acquisition related expenses, and head count related expenses.

The “Reconciliation to Consolidated Totals (Corporate)” in Note 13 to the Consolidated Financial Statements included herein represents Corporate office operating charges.

### *Interest Expense, Net*

Interest expense was \$4.6 million in 2017, \$1.3 million in 2016 and \$0.8 million in 2015. The increase in interest expense in 2017 as compared to 2016 was due to higher average outstanding borrowings (\$211.3 million compared to \$89.2 million) and higher average interest rates (2.1% vs. 1.6%) as a result of the additional borrowings to fund the Company’s 2017 acquisitions (Mayday, Morgan Schaffer, NRG and Vanguard Instruments). The increase in interest expense in 2016 as compared to 2015 was due to higher average interest rates (1.6% vs. 1.3%) and higher average outstanding borrowings (\$89.2 million vs. \$68.5 million) as a result of the additional borrowings to fund the Company’s 2016 acquisitions (Westland, Plastique and Fremont).

### *Income Tax Expense*

The effective tax rates from continuing operations for 2017, 2016 and 2015 were 33.0%, 32.9% and 32.2%, respectively. The increase in the 2017 effective tax rate as compared to 2016 as well as the 2016 effective tax rate as compared to 2015 was primarily due to normal tax fluctuations within the ordinary course of business.

The Company's foreign subsidiaries had accumulated unremitted earnings of \$48.9 million and cash of \$28.4 million at September 30, 2017. No deferred taxes have been provided on these accumulated unremitted earnings because these funds are not needed to meet the liquidity requirements of the Company's U.S. operations and it is the Company's intention to indefinitely reinvest these earnings in continuing international operations. In the event these foreign entities' earnings were distributed, it is estimated that U.S. taxes, net of available foreign tax credits, of approximately \$6.9 million would be due, which would correspondingly reduce the Company's net earnings. No significant portion of the Company's foreign subsidiaries' earnings was taxed at a rate significantly less than the U.S. statutory tax rate.

### **Capital Resources and Liquidity**

The Company's overall financial position and liquidity are strong. Working capital (current assets less current liabilities) increased to \$197.8 million at September 30, 2017, from \$165.4 million at September 30, 2016, mainly due to higher accounts receivable and inventory balances. The \$39.1 million increase in accounts receivable at September 30, 2017 was mainly due to a \$17.5 million increase within the Filtration segment mainly due to the acquisition of Mayday and a \$16.2 million increase within the USG segment mainly due to the acquisitions of NRG, Morgan Schaffer and Vanguard Instruments. The \$19.0 million increase in inventory at September 30, 2017 was mainly due to a \$10.9 million increase in the USG segment due to the NRG, Morgan Schaffer and Vanguard Instruments acquisitions and a \$7.5 million increase in the Filtration segment due to the Mayday acquisition.

Net cash provided by operating activities from continuing operations was \$67.3 million, \$73.9 million and \$65.0 million in 2017, 2016 and 2015, respectively; the changes were mainly due to changes in working capital.

Net cash used in investing activities from continuing operations was \$233.9 million, \$104.6 million and \$39.5 million in 2017, 2016, and 2015, respectively. The increase in net cash used in investing activities in 2017 as compared to 2016 was due to the Company's 2017 acquisitions of Mayday, NRG, Morgan Schaffer and Vanguard Instruments. Capital expenditures for continuing operations were \$29.7 million, \$13.8 million and \$12.4 million in 2017, 2016 and 2015, respectively. The increase in capital expenditures in 2017 as compared to 2016 was mainly due to an increase in machinery and equipment at VACCO, a facility expansion at Plastique and the capital expenditures specific to the Company's recently acquired entities. There were no commitments outstanding that were considered material for capital expenditures at September 30, 2017. In addition, the Company incurred expenditures for capitalized software of \$9.0 million, \$8.7 million and \$6.9 million 2017, 2016 and 2015, respectively. The increase in 2016 as compared to 2015 was mainly due to higher capitalized software expenditures within the USG and Test segments.

The Company made required pension contributions of \$2.7 million, \$0 and \$0.7 million in 2017, 2016 and 2015, respectively.

Net cash provided by financing activities was \$156.8 million and \$46.2 million in 2017 and 2016, respectively, compared to net cash used by financing activities of \$16.6 million in 2015. The increase in 2017 compared to 2016 and 2015 was mainly due to an increase in borrowings related to the Company's recent acquisitions.

### *Acquisitions*

#### 2017

On August 30, 2017, the Company acquired the assets of Vanguard Instruments Company (Vanguard Instruments), a test equipment provider serving the global electric utility market for a purchase price of \$36.0 million in cash. Vanguard Instruments designs, develops and manufactures test equipment which enhances the ability of electric utilities to accurately measure the health of critical power transformers and circuit breakers. The business, located in Ontario, California, operates from its current location as a product line of Doble within the Company's USG segment and has annualized sales of approximately \$14 million. Based on the preliminary purchase price allocation, the Company recorded approximately \$1.8 million of accounts receivable, \$2.1 million of inventory, \$0.3 million of property, plant and equipment, \$0.2 million of accounts payable and accrued expenses, \$10.7 million of goodwill, \$3.2 million of trade names and \$18.0 million of amortizable intangible assets consisting of customer relationships with a weighted average life of 15 years.

On May 25, 2017, the Company acquired the assets of Morgan Schaffer Inc. (Morgan Schaffer), a global utilities provider located in Montreal, Quebec, Canada, for a purchase price of \$48.8 million in cash. Morgan Schaffer has annualized sales of approximately \$25 million. It designs, develops, manufactures and markets an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers. Since the date of acquisition, the operating results for Morgan Schaffer have been included in the Company's USG segment. Based on the preliminary purchase price allocation, the Company recorded approximately \$2.5 million of accounts receivable, \$5.2 million of inventory, \$1.7 million of property, plant and equipment, \$0.4 million of other assets, \$4.9 million of accounts payable and accrued expenses, \$4.8 million of goodwill, \$35.6 million of trade names and \$3.6 million of amortizable intangible assets consisting of customer relationships and developed technology with a weighted average life of approximately 10 years.

On May 8, 2017, the Company acquired NRG Systems, Inc. (NRG), located in Hinesburg, Vermont, for a purchase price of \$38.6 million in cash. NRG is the global market leader in the design and manufacture of decision support tools for the renewable energy industry, primarily wind. NRG has annualized sales of approximately \$45 million. Since the date of acquisition, the operating results for NRG have been included in the Company's USG segment. Based on the preliminary purchase price allocation, the Company recorded approximately \$1.5 million of cash, \$4.1 million of accounts receivable, \$5.1 million of inventory, \$1.0 million of other assets, \$9.4 million of property, plant and equipment (including a capital lease), \$4.1 million of accounts payable and accrued expenses, \$9.7 million of lease liability, \$8.0 million of goodwill, \$8.1 million of trade names and \$17.2 million of amortizable intangible assets consisting of customer relationships with a weighted average life of approximately 14 years.

On November 7, 2016, the Company acquired aerospace suppliers Mayday Manufacturing Co. (Mayday) and its affiliate Hi-Tech Metals, Inc. (Hi-Tech), which share a state-of-the-art, expandable 130,000 square foot facility in Denton, Texas, for a purchase price of approximately \$75 million in cash. Mayday is a leading manufacturer of mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls and actuation systems for the aerospace and defense industry. Hi-Tech is a full-service metal processor offering aerospace OEM's and Tier 1 suppliers a large portfolio of processing services including anodizing, cadmium and zinc-nickel plating, organic coatings, non-destructive testing and heat treatment. Mayday and Hi-Tech together have annual sales of approximately \$40 million. Since the date of acquisition, the consolidated operating results for Mayday and Hi-Tech have been included in the Company's Filtration segment. Based on the purchase price allocation, the Company recorded approximately \$7.3 million of accounts receivable, \$10.6 million of inventory, \$16.6 million of property, plant and equipment (including a capital lease), \$10.1 million of lease liability, \$15.6 million of deferred tax liabilities, \$30.2 million of goodwill, \$4.8 million of trade names and \$32.8 million of amortizable identifiable intangible assets consisting primarily of customer relationships with a weighted-average life of approximately 20 years.

2016

On September 2, 2016, the Company acquired the stock of Westland Technologies, Inc. (Westland), located in Modesto, California, for a purchase price of approximately \$41 million in cash. Westland is a market leader in the design, development and manufacture of elastomeric-based signature reduction solutions which enhance U.S. Naval maritime platform survivability. Westland has annual sales of approximately \$25 million. Since the date of acquisition, the operating results for Westland have been included within the Company's Filtration segment. Based on the purchase price allocation, the Company recorded tangible assets, net, of \$5.5 million, deferred tax liabilities of \$9.5 million, goodwill of \$17.9 million, and \$28.3 million of identifiable intangible assets primarily consisting of customer relationships.

On January 29, 2016, the Company acquired Plastique, which is headquartered in Tunbridge Wells, England and has manufacturing locations in Nottingham, England and Poznan, Poland, for a purchase price of approximately \$31.6 million (of which \$2.7 million is due over the next two years). Plastique is a market leader in the development and manufacture of highly-technical thermoformed plastic and precision molded pulp fiber packaging primarily serving pharmaceutical, personal care, and various specialty end markets. Since the date of acquisition, the operating results for Plastique have been included within the Company's Technical Packaging segment. Plastique has annual sales of approximately \$35 million. Based on the purchase price allocation, the Company recorded tangible assets, net, of \$9.6 million, goodwill of \$10.2 million, and \$11.9 million of identifiable intangible assets primarily consisting of customer relationships.

On October 16, 2015, the Company acquired the stock of Fremont Plastics, Inc. (Fremont) for a purchase price of \$10.5 million in cash. The Company also purchased for \$2 million Fremont's real property located in Fremont, Indiana. Fremont was a developer, manufacturer, promoter and seller of high quality sterile-ready and non-sterile thin gauge thermoformed medical plastic packaging products. Immediately following the closing of the transaction, Fremont was merged into TEQ, and therefore since the date of acquisition the operating results for Fremont have been included as part of TEQ.



2015

On January 28, 2015, the Company acquired the assets of Enoserv, LLC (Enoserv), headquartered in Tulsa, Oklahoma, for \$20.5 million in cash. Enoserv provides utility customers with high quality, user-friendly multi-platform software and has annual revenues of approximately \$8 million. Since the date of acquisition the operating results for Enoserv have been included as part of Doble within the Company's USG segment. Based on the purchase price allocation, the Company recorded approximately \$10.0 million of goodwill and \$9.0 million of amortizable identifiable intangible assets consisting primarily of customer relationships and developed technology.

All of the Company's acquisitions have been accounted for using the purchase method of accounting, and accordingly, the respective purchase prices were allocated to the assets (including intangible assets) acquired and liabilities assumed based on estimated fair values at the date of acquisition. The financial results from these acquisitions have been included in the Company's financial statements from the date of acquisition.

***Bank Credit Facility***

The Company's existing credit facility ("the Credit Facility") matures December 21, 2020. The Credit Facility includes a \$450 million revolving line of credit as well as provisions allowing for the increase of the credit facility commitment amount by an additional \$250 million, if necessary, with the consent of the lenders. The bank syndication supporting the facility is comprised of a diverse group of nine banks led by JP Morgan Chase Bank, N.A., as Administrative Agent.

At September 30, 2017, the Company had approximately \$166 million available to borrow under the Credit Facility, plus the \$250 million increase option, in addition to \$45.5 million cash on hand. The Company classified \$20.0 million as the current portion of long-term debt as of September 30, 2017, as the Company intends to repay this amount within the next twelve months; however, the Company has no contractual obligation to repay such amount during the next twelve months.

The Credit Facility requires, as determined by certain financial ratios, a facility fee ranging from 12.5 to 27.5 basis points per annum on the unused portion. The terms of the facility provide that interest on borrowings may be calculated at a spread over the London Interbank Offered Rate (LIBOR) or based on the prime rate, at the Company's election. The facility is secured by the unlimited guaranty of the Company's material domestic subsidiaries and a 65% pledge of its material foreign subsidiaries' share equity. The financial covenants of the Credit Facility include a leverage ratio and an interest coverage ratio. As of September 30, 2017, the Company was in compliance with all bank covenants.

Cash flow from operations and borrowings under the Credit Facility are expected to provide adequate resources to meet the Company's capital requirements and operational needs for the foreseeable future.

***Dividends***

Since 2010 the Company has paid a regular quarterly cash dividend at an annual rate of \$0.32 per share. The Company paid dividends of \$8.3 million, \$8.2 million and \$8.4 million in 2017, 2016 and 2015, respectively.

***Contractual Obligations***

The following table shows the Company's contractual obligations as of September 30, 2017:

(Dollars in millions)	Total	Payments due by period			
		Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Long-Term Debt Obligation	\$275.0	-	-	275.0	-
Estimated Interest Payments <sup>(1)</sup>	31.4	8.3	15.1	7.5	0.5
Operating Lease Obligations	21.7	6.4	9.1	4.7	1.5
Purchase Obligations <sup>(2)</sup>	9.8	8.4	1.4	-	-
Total	\$337.9	23.1	25.6	287.2	2.0

<sup>(1)</sup> Estimated interest payments for the Company's debt obligations were calculated based on Management's determination of the estimated applicable interest rates and payment dates.

A purchase obligation is defined as a legally binding and enforceable agreement to purchase goods and services that <sup>(2)</sup>specifies all significant terms. Since the majority of the Company's purchase orders can be cancelled, they are not included in the table above.

As of September 30, 2017, the Company had \$0.1 million of liabilities for uncertain tax positions. The unrecognized tax benefits have been excluded from the table above due to uncertainty as to the amounts and timing of settlement with taxing authorities.

The Company had no off-balance-sheet arrangements outstanding at September 30, 2017.

***Share Repurchases***

In August 2012, the Company's Board of Directors authorized a common stock repurchase program under which the Company may repurchase shares of its stock from time to time in its discretion, in the open market or otherwise, up to a maximum total repurchase amount of \$100 million (or such lesser amount as may be permitted under the Company's bank credit agreements). This program has been twice extended by the Company's Board of Directors and is currently scheduled to expire September 30, 2019. There were no share repurchases in 2017. The Company repurchased approximately 120,000 shares for \$4.3 million in 2016 and 517,000 shares for \$18.2 million in 2015. At September

30, 2017 approximately \$50.4 million remained available for repurchases under the program.

### ***Pension Funding Requirements***

The minimum cash funding requirements related to the Company's defined benefit pension plans are estimated to be approximately \$2.8 million in 2018, \$2.8 million in 2019, and \$3.1 million in 2020.

### ***Other***

As a normal incident of the business in which the Company is engaged, various claims, charges and litigation are asserted or commenced from time to time against the Company. Additionally, the Company is currently involved in various stages of investigation and remediation relating to environmental matters. It is the opinion of Management that the aggregate costs involved in the resolution of these matters, and final judgments, if any, which might be rendered against the Company are adequately reserved for, are covered by insurance or are not likely to have a material adverse effect on the Company's results from continuing operations, capital expenditures or competitive position.

### **Outlook**

Management continues to see meaningful sales and Adjusted EBITDA growth across each of the Company's business segments and anticipates growth rates in 2018 and beyond that exceed the Company's defined peer group and the broader industrial market. The details of Management's growth expectations for 2018 compared to 2017 are as follows:

Sales are expected to increase approximately 13% driven by: incremental sales from acquisitions being included for a full year; increased commercial aerospace deliveries at PTI, Crissair and Mayday; higher organic sales at USG; significantly higher sales at Test including new product wins currently in backlog; partially offset by a reduction in lower margin industrial/automotive market product deliveries at PTI; and flat sales in Technical Packaging.

Interest expense on higher debt (acquisition funding) is expected to be approximately \$9.5 million, reflecting an increase of \$4.9 million (or \$0.12 per share) over the \$4.6 million of interest expense in 2017;

Non-cash depreciation and amortization of intangibles is expected to increase approximately \$7.1 million (or \$0.18 per share after-tax) as a result of the recent acquisitions. Purchase accounting intangible asset amortization charges are recorded at Corporate;

Income tax expense is expected to increase in 2018 as Management is projecting a 35% effective tax rate calculated on higher pretax earnings.

In summary, Management projects 2018 EPS to be in the range of \$2.30 to \$2.40 per share, including the profit contributions from the recent acquisitions, the additional depreciation and amortization charges, higher interest, and incremental tax expense as described above.

On a quarterly basis, Management expects 2018 operating results to reflect a profile similar to 2017 and previous years, with revenues and EPS being more second-half weighted. As with past years, projected second half 2018 sales and EPS are expected to be significantly stronger than the first half. Management expects Q1 2018 EPS to be in the range of \$0.28 to \$0.33 per share. The timing of quarterly sales and earnings throughout the year, coupled with higher non-cash charges within the respective quarters impacts comparability in Q1.

## **Market Risk Analysis**

### ***Market Risk Exposure***

Market risks relating to the Company's operations result primarily from changes in interest rates and changes in foreign currency exchange rates. The Company is exposed to market risk related to changes in interest rates and selectively uses derivative financial instruments, including forward contracts and swaps, to manage these risks. During 2016, the Company entered into several forward contracts to purchase pounds sterling (GBP) to hedge two deferred payments due in connection with the acquisition of Plastique. In 2017, the Company's Canadian subsidiary Morgan Schaffer entered into foreign exchange contracts to manage foreign currency risk, as a portion of their revenue is denominated in U.S. dollars. All derivative instruments are reported on the balance sheet at fair value. For derivative instruments designated as cash flow hedges, the gain or loss on the derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item.

The Company has determined that the market risk related to interest rates with respect to its variable debt is not material. The Company estimates that if market interest rates averaged one percentage point higher, the effect would have been less than 4% of net earnings for the year ended September 30, 2017.

The following is a summary of the notional transaction amounts and fair values for the Company's outstanding derivative financial instruments as of September 30, 2017.

(In thousands)	Notional Amount (Currency)	Fair Value (US\$)
Forward contracts	1,859 GBP	(173 )
Forward contracts	3,250 USD	149
Forward contracts	200 EUR	(5 )

The Company is also subject to foreign currency exchange rate risk inherent in its sales commitments, anticipated sales, anticipated purchases and assets and liabilities denominated in currencies other than the U.S. dollar. The foreign currencies most significant to the Company's operations are the Canadian Dollar and the Euro. The Company occasionally hedges certain foreign currency commitments by purchasing foreign currency forward contracts. The Company does not have material foreign currency market risk; net foreign currency transaction gain/loss was less than 2% of net earnings for 2017, 2016 and 2015.

### Critical Accounting Policies

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires Management to make estimates and assumptions in certain circumstances that affect amounts reported in the accompanying Consolidated Financial Statements. In preparing these financial statements, Management has made its best estimates and judgments of certain amounts included in the Consolidated Financial Statements, giving due consideration to materiality. The Company does not believe there is a great likelihood that materially different amounts would be reported under different conditions or using different assumptions related to the accounting policies described below. However, application of these accounting policies involves the exercise of judgment and use of assumptions as to future uncertainties and, as a result, actual results could differ from these estimates. The Company's senior Management discusses the critical accounting policies described below with the Audit and Finance Committee of the Company's Board of Directors on a periodic basis.

The following discussion of critical accounting policies is intended to bring to the attention of readers those accounting policies which Management believes are critical to the Consolidated Financial Statements and other financial disclosure. It is not intended to be a comprehensive list of all significant accounting policies that are more fully described in Note 1 to the Consolidated Financial Statements included herein.

### ***Revenue Recognition***

***Filtration Segment:*** Within the Filtration segment, approximately 86% of revenues (approximately 36% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers.

Approximately 14% of the segment's revenues (approximately 6% of consolidated revenues) are recorded under the percentage-of-completion method because the Company manufactures complex products for aerospace and military customers under production contracts. The majority of these contracts are cost-reimbursable contracts which provide for the payment of allowable costs incurred during the performance of the contract plus an incentive fee. The remainder of the contracts are fixed-price contracts. The percentage-of-completion method of accounting involves the use of various estimating techniques to project costs at completion. These estimates involve various assumptions and projections relative to the outcome of future events over a period of several years, including future labor productivity and availability, the nature and complexity of the work to be performed, availability of materials, the impact of delayed performance, the timing of product deliveries, and estimates of incentive fees based on past experience and anticipated performance. These estimates are based on Management's judgment and the Company's substantial experience in developing these types of estimates. Changes in underlying assumptions/estimates may adversely affect financial performance if they increase estimated project costs at completion, or positively affect financial performance if they decrease estimated project costs at completion. Due to the nature of these contracts and the operating unit's cost estimating process, the Company believes that these estimates generally should not be subject to significant variation in the future. There have been no material changes to these estimates for the financial statement periods presented. The Company regularly reviews its estimates to assess revisions in contract values and estimated costs at completion.

***Test Segment:*** Within the Test segment, approximately 30% of revenues (approximately 7% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers.

Approximately 70% of the segment's revenues (approximately 16% of consolidated revenues) are recorded under the percentage-of-completion method due to the complex nature of the enclosures that are designed and produced under these contracts. As discussed above, this method of accounting involves the use of various estimating techniques to project costs at completion, which are based on Management's judgment and the Company's substantial experience in developing these types of estimates. Changes in underlying assumptions/estimates may adversely or positively affect

financial performance in a period. Due to the nature of these contracts and the operating unit's cost estimating process, the Company believes that these estimates generally should not be subject to significant variation in the future. There have been no material changes to these estimates for the financial statement periods presented. The Company regularly reviews its contract estimates to assess revisions in contract values and estimated costs at completion.

*USG Segment:* Within the USG segment, approximately 78% of revenues (approximately 18% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers. Approximately 22% of the segment's revenues (approximately 5% of consolidated revenues) are recognized on a straight-line basis over the lease term.

*Technical Packaging Segment:* Within the Technical Packaging segment, 100% of revenues (approximately 12% of consolidated revenues) represent products and services sold and are recognized when products are delivered (when title and risk of ownership transfers), or when services are performed for unaffiliated customers.

### ***Income Taxes***

The Company operates in numerous taxing jurisdictions and is subject to examination by various U.S. Federal, state and foreign jurisdictions for various tax periods. The Company's income tax positions are based on research and interpretations of the income tax laws and rulings in each of the jurisdictions in which the Company does business. Due to the subjectivity of interpretations of laws and rulings in each jurisdiction, the differences and interplay in tax laws between those jurisdictions, as well as the inherent uncertainty in estimating the final resolution of complex tax audit matters, Management's estimates of income tax liabilities may differ from actual payments or assessments.



Management regularly assesses the Company's position with regard to tax exposures and records liabilities for these uncertain tax positions and related interest and penalties, if any, according to the principles of Financial Accounting Standards Board (FASB) ASC Topic 740, *Income Taxes* (ASC 740). The Company has recorded an accrual that reflects the recognition and measurement process for the financial statement recognition and measurement of a tax position taken or expected to be taken on a tax return based upon ASC 740. Additional future income tax expense or benefit may be recognized once the positions are effectively settled. It is the Company's policy to follow FASB ASC 740-10-45-20 and record the tax effects of changes in the opening balance of unrecognized tax benefits in net earnings from continuing operations.

At the end of each interim reporting period, Management estimates the effective tax rate expected to apply to the full fiscal year. The estimated effective tax rate contemplates the expected jurisdiction where income is earned, as well as tax planning strategies. Current and projected growth in income in higher tax jurisdictions may result in an increasing effective tax rate over time. If the actual results differ from Management's estimates, Management may have to adjust the effective tax rate in the interim period if such determination is made.

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. 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. Deferred tax assets may be reduced by a valuation allowance if it is more likely than not that some portion of the deferred tax assets will not be realized. 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. The Company regularly reviews its deferred tax assets for recoverability and establishes a valuation allowance when Management believes it is more likely than not such assets will not be recovered, taking into consideration historical operating results, expectations of future earnings, tax planning strategies, and the expected timing of the reversals of existing temporary differences.

### ***Goodwill And Other Long-Lived Assets***

Management annually reviews goodwill and other long-lived assets with indefinite useful lives for impairment or whenever events or changes in circumstances indicate the carrying amount may not be recoverable. If the Company determines that the carrying value of the long-lived asset may not be recoverable, a permanent impairment charge is recorded for the amount by which the carrying value of the long-lived asset exceeds its fair value. Fair value is measured based on a discounted cash flow method using a discount rate determined by Management to be commensurate with the risk inherent in the Company's current business model. The estimates of cash flows and discount rate are subject to change due to the economic environment, including such factors as interest rates, expected market returns and volatility of markets served. Management believes that the estimates of future cash flows and fair value are reasonable; however, changes in estimates could result in impairment charges. At September 30, 2017, the Company has determined that no reporting units are at risk of goodwill impairment as the fair value of each reporting

unit substantially exceeded its carrying value.

Intangible assets with estimable useful lives are amortized over their respective estimated useful lives to their estimated residual values, and are reviewed for impairment whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable.

#### ***Pension Plans and Other Postretirement Benefit Plans***

The measurement of liabilities related to pension plans and other postretirement benefit plans is based on Management's assumptions related to future events including interest rates, return on pension plan assets, and health care cost trend rates. Actual pension plan asset performance will either decrease or increase unamortized pension losses/gains that will affect net earnings in future years. Depending upon the performance of the equity and bond markets in 2018, the Company could be required to record a charge to other comprehensive income/loss. In addition, if the discount rate were decreased by 25 basis points from 3.65% to 3.40%, the projected benefit obligation for the defined benefit plan would increase by approximately \$2.8 million and result in an additional after-tax charge to other comprehensive income/loss of approximately \$1.8 million. The discount rate used in measuring the Company's pension and postretirement welfare obligations was developed by matching yields of actual high-quality corporate bonds to expected future pension plan cash flows (benefit payments). Over 400 Aa-rated, non-callable bonds with a wide range of maturities were used in the analysis. After using the bond yields to determine the present value of the plan cash flows, a single representative rate that resulted in the same present value was developed.

## **Other Matters**

### ***Contingencies***

As a normal incident of the businesses in which the Company is engaged, various claims, charges and litigation are asserted or commenced from time to time against the Company. Additionally, the Company is currently involved in various stages of investigation and remediation relating to environmental matters. It is the opinion of Management that the aggregate costs involved in the resolution of these matters, and final judgments, if any, which might be rendered against the Company are adequately accrued, are covered by insurance or are not likely to have a material adverse effect on the Company's results from continuing operations, capital expenditures, or competitive position.

### ***Quantitative and Qualitative Disclosures About Market Risk***

Market risks relating to the Company's operations result primarily from changes in interest rates and changes in foreign currency exchange rates. The Company is exposed to market risk related to changes in interest rates and selectively uses derivative financial instruments, including forward contracts and swaps, to manage these risks. During 2016 the Company entered into several forward contracts to purchase pounds sterling (GBP) to hedge two deferred payments (one due in January 2018 and one due in January 2019) due in connection with the acquisition of Plastique. In addition, the Company's Canadian subsidiary Morgan Schaffer has entered into foreign exchange contracts to manage foreign currency risk as a portion of their revenue is denominated in U.S. dollars. All derivative instruments are reported on the balance sheet at fair value. For derivative instruments designated as cash flow hedges, the gain or loss on the derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item. See further discussion regarding the Company's market risks in "Market Risk Analysis," above.

### ***Controls and Procedures***

For a description of the Company's evaluation of its disclosure controls and procedures, see Item 9A, "Controls and Procedures."

### **New Accounting Pronouncements**

In January 2017, the FASB issued Accounting Standards Update (ASU) No. 2017-04, *Simplifying the Test for Goodwill Impairment* (ASU 2017-04), which eliminates Step 2 from the goodwill impairment test. Under the amendments in this update, an entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The new standard is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company adopted this standard in the fourth quarter of 2017 with its annual goodwill impairment tests. The adoption of ASU 2017-04 did not have an impact on the Company's Consolidated Financial Statements.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which simplified the income tax consequences, accounting for forfeitures and classification on the Statements of Consolidated Cash Flows. The Company adopted this standard in the current year resulting in the income tax expense in the third quarter and fiscal year 2017 being favorably impacted by additional tax benefits on share-based compensation that vested during the third quarter of 2017 decreasing the effective tax rate by 5.1% and 1.1%, respectively.

In February 2016, the FASB issued ASU No. 2016-062, *Leases (Topic 842)*, which, among other things, requires an entity to recognize lease assets and lease liabilities on the balance sheet and disclose key information about leasing arrangements. This new standard will increase an entity's reported assets and liabilities. The new standard is effective for fiscal years beginning after December 15, 2018 and mandates a modified retrospective transition period for all entities. The Company is currently assessing the impact of this new standard on its consolidated financial statements and related disclosures.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes*, which requires entities to present deferred tax assets and deferred tax liabilities as noncurrent in a classified balance sheet. This new standard is effective for annual periods beginning after December 15, 2016. The Company adopted this standard during the fourth quarter of 2016 and applied it on a prospective basis.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. This guidance has been further clarified and amended. The new standard will be effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is currently in the process of calculating the effect that ASU 2014-09 will have on its consolidated financial statements and related disclosures. The Company has selected the Cumulative Effect method of transition to the new standard.

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

See “Market Risk Analysis” and “Other Matters – Quantitative And Qualitative Disclosures About Market Risk” in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” which are incorporated into this Item by reference.

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

The information required by this Item is incorporated by reference to the Consolidated Financial Statements of the Company, the Notes thereto, and the related “Report of Independent Registered Public Accounting Firm” of KPMG LLP, as set forth in the Financial Information section beginning on page F-1 of this Annual Report; an Index is provided on page F-1.

#### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not Applicable.

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

For 2017 the Company carried out an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act). The evaluation was conducted under the supervision and with the participation of the Company's Management, including the Company's Chief Executive Officer and Chief Financial Officer, using the *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Disclosure controls and procedures are controls and procedures that are designed to ensure that information required to be disclosed in Company reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2017.

There were no changes in the Company's internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the fiscal quarter ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

For the remainder of the information required by this item, see "Management's Report on Internal Control over Financial Reporting" and the related "Report of Independent Registered Public Accounting Firm" of KPMG LLP, in the Financial Information section beginning on page F-1 of this Annual Report, which are incorporated into this Item by reference.

#### Item 9B. Other Information

None.

## PART III

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

Information regarding nominees and directors, the Company's Code of Ethics, its Audit and Finance Committee, and compliance with Section 16(a) of the Securities Exchange Act of 1934 is hereby incorporated by reference to the sections captioned "Proposal 1: Election of Directors," "Board of Directors – Governance Policies and Management Oversight," "Committees" and "Securities Ownership – Section 16(a) Beneficial Ownership Reporting Compliance" in the 2017 Proxy Statement.

Information regarding the Company's executive officers is set forth in Item 1, "Business – Executive Officers of the Registrant," above.

### Item 11. Executive Compensation

Information regarding the Company's compensation committee and director and executive officer compensation is hereby incorporated by reference to the sections captioned "Committees – Compensation Committee Interlocks and Insider Participation," "Director Compensation" and "Executive Compensation Information" in the 2017 Proxy Statement.

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

Information regarding the beneficial ownership of shares of the Company's common stock by nominees and directors, by executive officers, by directors and executive officers as a group and by any known five percent stockholders is hereby incorporated by reference to the section captioned "Securities Ownership" in the 2017 Proxy Statement.

Information regarding shares of the Company's common stock issued or issuable under the Company's equity compensation plans is hereby incorporated by reference to the section captioned "Proposal 3: Approval of 2018 Omnibus Incentive Plan – Other Equity Compensation Plan Information" in the 2017 Proxy Statement.

Item 13. Certain Relationships and Related Transactions and Director Independence

Information regarding transactions with related parties and the independence of the Company's directors, nominees for directors and members of the committees of the board of directors is hereby incorporated by reference to the sections captioned "Board of Directors" and "Committees" in the 2017 Proxy Statement.

Item 14. Principal Accounting Fees and Services

Information regarding the Company's independent registered public accounting firm, its fees and services, and the Company's Audit and Finance Committee's pre-approval policies and procedures regarding such fees and services, is hereby incorporated by reference to the section captioned "Audit-Related Matters" in the 2017 Proxy Statement.



PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as a part of this Report:

(1) **Financial Statements.** The Consolidated Financial Statements of the Company, and the Report of Independent Registered Public Accounting Firm thereon of KPMG LLP, are included in this Report beginning on page F-1; an Index thereto is set forth on page F-1.

(2) **Financial Statement Schedules.** Financial Statement Schedules are omitted because either they are not applicable or the required information is included in the Consolidated Financial Statements or the Notes thereto.

(3) **Exhibits.** The following exhibits are filed with this Report or incorporated herein by reference to the document location indicated:

Exhibit No.	Description	Document Location
3.1(a)	<u>Restated Articles of Incorporation</u>	<u>Exhibit 3(a) to the Company's Form 10-K for the fiscal year ended September 30, 1999</u>
3.1(b)	<u>Amended Certificate of Designation, Preferences and Rights of Series A Participating Cumulative Preferred Stock</u>	<u>Exhibit 4(e) to the Company's Form 10-Q for the fiscal quarter ended March 31, 2000</u>
3.1(c)	<u>Articles of Merger, effective July 10, 2000</u>	<u>Exhibit 3(c) to the Company's Form 10-Q for the fiscal quarter ended June 30, 2000</u>
3.2	<u>Bylaws</u>	<u>Exhibit 3.1 to the Company's Form 8-K filed August 7, 2014</u>
4.1	<u>Specimen revised Common Stock Certificate</u>	<u>Exhibit 4.1 to the Company's Form 10-Q for the fiscal quarter ended March 31, 2010</u>

<u>4.2</u>	<u>Credit Agreement dated as of May 14, 2012 among the Registrant, the Foreign Subsidiary Borrowers from time to time party thereto, the Lenders from time to time party thereto, JPMorgan Chase Bank, N.A. as Administrative Agent, PNC Bank, National Association as Syndication Agent, and SunTrust Bank, Wells Fargo Bank, National Association and Bank of America, N.A. as Co-Documentation Agents.</u>	<u>Exhibit 4.1 to the Company's Form 8-K filed May 18, 2012</u>
<u>4.3</u>	<u>Amended and Restated Credit Agreement dated as of December 21, 2015 among the Registrant, the Foreign Subsidiary Borrowers from time to time party thereto, the Lenders from time to time party thereto, JP Morgan Chase Bank, N.A. as Administrative Agent, and Bank of America, N.A., BMO Harris Bank, N.A., SunTrust Bank and Wells Fargo Bank, National Association as Co-Documentation Agents</u>	<u>Exhibit 4.1 to the Company's Form 8-K filed December 23, 2015</u>
<u>4.4</u>	<u>Amendment No. 1 to Credit Agreement dated as of December 21, 2015, effective September 30, 2016</u>	<u>Exhibit 4.4 to the Company's Form 10-K filed November 29, 2016</u>
<u>4.5</u>	<u>Amendment No. 2 to Credit Agreement dated as of December 21, 2015, effective May 15, 2017</u>	<u>Exhibit 4.4 to the Company's Form 10-Q filed August 8, 2017</u>
<u>10.1</u>	<u>Securities Purchase Agreement dated March 14, 2014 between ESCO Technologies Holding LLC and Meter Readings Holding LLC</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed March 28, 2014</u>

Exhibit No.	Description	Document Location
10.2	<u>Form of Indemnification Agreement with each of ESCO's non-employee directors</u>	<u>Exhibit 10.1 to the Company's Form 10-K for the fiscal year ended September 30, 2012</u>
10.3(a)	<u>First Amendment to the ESCO Electronics Corporation Supplemental *Executive Retirement Plan, effective August 2, 1993 (comprising restatement of entire Plan)</u>	<u>Exhibit 10.2(a) to the Company's Form 10-K for the fiscal year ended September 30, 2012</u>
10.3(b)	<u>*Second Amendment to Supplemental Executive Retirement Plan, effective May 1, 2001</u>	<u>Exhibit 10.4 to the Company's Form 10-K for the fiscal year ended September 30, 2001</u>
10.3(c)	<u>*Form of Supplemental Executive Retirement Plan Agreement</u>	<u>Exhibit 10.28 to the Company's Form 10-K for the fiscal year ended September 30, 2002</u>
10.4(a)	<u>*Directors' Extended Compensation Plan, adopted effective October 11, 1993</u>	<u>Exhibit 10.3(a) to the Company's Form 10-K for the fiscal year ended September 30, 2012</u>
10.4(b)	<u>*First Amendment to Directors' Extended Compensation Plan effective January 1, 2000</u>	<u>Exhibit 10.11 to the Company's Form 10-K for the fiscal year ended September 30, 2000</u>
10.4(c)	<u>*Second Amendment to Directors' Extended Compensation Plan, effective April 1, 2001</u>	<u>Exhibit 10.7 to the Company's Form 10-K for the fiscal year ended September 30, 2001</u>
10.4(d)	<u>*Third Amendment to Directors' Extended Compensation Plan, effective October 3, 2007</u>	<u>Exhibit 10.43 to the Company's Form 10-K for the fiscal year ended September 30, 2007</u>
10.4(e)	<u>*Fourth Amendment to Directors' Extended Compensation Plan, effective August 7, 2013</u>	<u>Exhibit 10.3(e) to the Company's Form 10-K for the fiscal year ended September 30, 2013</u>
10.5(a)	<u>*Compensation Plan For Non-Employee Directors, as restated to reflect all amendments through May 29, 2014</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed October 2, 2014</u>
10.5(b)	<u>*Compensation Plan For Non-Employee Directors, as amended and restated November 8, 2017</u>	<u>Exhibit 10.3 to the Company's Form 8-K filed November 14, 2017</u>
10.6(a)	<u>*2013 Incentive Compensation Plan</u>	

	<u>Appendix A to the Company's Schedule 14A Proxy Statement filed December 19, 2012</u>	
<u>10.6(b)</u>	* <u>Form of Notice of Award (2013-14) – Performance-Accelerated Restricted Stock (2013 Incentive Compensation Plan)</u>	<u>Exhibit 10.7(b) to the Company's Form 10-K for the fiscal year ended September 30, 2013</u>
<u>10.6(c)</u>	* <u>Form of Award Agreement under 2013 Incentive Compensation Plan, effective November 11, 2015</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed November 12, 2015</u>
<u>10.6(d)</u>	* <u>Form of Amendment to 2012-2014 Awards under 2004 and 2013 Incentive Compensation Plans, effective November 11, 2015</u>	<u>Exhibit 10.2 to the Company's Form 8-K filed November 12, 2015</u>
<u>10.7(a)</u>	* <u>Sixth Amendment and Restatement of Employee Stock Purchase Plan effective as of October 15, 2003</u>	<u>Appendix C to the Company's Schedule 14A Proxy Statement filed December 29, 2003</u>
<u>10.7(b)</u>	* <u>Seventh Amendment to Employee Stock Purchase Plan effective as of February 6, 2013</u>	<u>Exhibit 10.8(b) to the Company's Form 10-K for the fiscal year ended September 30, 2013</u>
<u>10.8(a)</u>	<u>Performance Compensation Plan for Corporate, Subsidiary and Division Officers and Key Managers, adopted August 2, 1993, as amended and restated through August 8, 2012</u>	<u>Exhibit 10.9 to the Company's Form 10-K for the fiscal year ended September 30, 2012</u>
<u>10.8(b)</u>	<u>Performance Compensation Plan for Corporate, Subsidiary and Division Officers and Key Managers, adopted August 2, 1993, as amended and restated through November 9, 2017</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed November 14, 2017</u>

Exhibit No.	Description	Document Location
10.9	<u>Incentive Compensation Plan for Executive Officers, adopted *November 9, 2005, as amended and restated through August 8, 2012</u>	<u>Exhibit 10.10 to the Company's Form 10-K for the fiscal year ended September 30, 2012</u>
10.10	<u>Compensation Recovery Policy, *adopted effective February 4, 2010</u>	<u>Exhibit 10.6 to the Company's Form 8-K filed February 10, 2010</u>
10.11	<u>Severance Plan adopted as of August 10, 1995, as Amended and Restated November 11, 2015</u>	<u>Exhibit 10.1 to the Company's Form 8-K/A filed November 30, 2015</u>
10.12(a)	<u>Employment Agreement with *Victor L. Richey, effective November 3, 1999</u>	<u>Exhibit 10(bb) to the Company's Form 10-K for the fiscal year ended September 30, 1999</u>
(Note: Agreement with Victor L. Richey is substantially identical to the referenced Exhibit and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)		
10.12(b)	<u>Second Amendment to Employment Agreement with *Victor L. Richey, effective May 5, 2004</u>	<u>Exhibit 10.1 to the Company's Form 10-Q for the fiscal quarter ended June 30, 2004</u>
10.12(c)	<u>Third Amendment to Employment Agreement with *Victor L. Richey, effective December 31, 2007</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed January 7, 2008</u>
10.13(a)	<u>Employment Agreement with *Gary E. Muenster, effective November 3, 1999</u>	<u>Exhibit 10(bb) to the Company's Form 10-K for the fiscal year ended September 30, 1999</u>

(Note: Agreement with Gary E. Muenster is substantially identical to the referenced Exhibit except that it provides a minimum base salary of \$108,000, and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)

10.13(b) \* Second Amendment to Employment Agreement with Gary E. Muenster, effective May 5, 2004 Exhibit 10.2 to the Company's Form 10-Q for the fiscal quarter ended June 30, 2004

10.13(c) \* Third Amendment to Employment Agreement with Gary E. Muenster, effective December 31, 2007 Exhibit 10.1 to the Company's Form 8-K filed January 7, 2008

(Note: Third Amendment with Gary E. Muenster is substantially identical to the referenced Exhibit except that (i) the termination amounts payable under Paragraph 9.a(1) are equal to base salary for 12 months and (ii) under Paragraph 9.a(1)(B), such termination amounts may be paid in biweekly installments equal to 1/26th of such amounts, and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)

10.13(d) \* Fourth Amendment to Employment Agreement with Gary E. Muenster, effective February 6, 2008 Exhibit 10.1 to the Company's Form 8-K filed February 12, 2008

10.14(a) \* Employment Agreement with Alyson S. Barclay, effective November 3, 1999 Exhibit 10(bb) to the Company's Form 10-K for the fiscal year ended September 30, 1999

(Note: Agreement with Alyson S. Barclay is substantially identical to the referenced Exhibit except that it provides a minimum base salary of \$94,000, and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)

Exhibit No.	Description	Document Location
10.14(b) *	<u>Second Amendment to Employment Agreement with Alyson S. Barclay, effective May 5, 2004</u>	<u>Exhibit 10.2 to the Company's Form 10-Q for the fiscal quarter ended June 30, 2004</u>
		(Note: Second Amendment with Alyson S. Barclay is substantially identical to the referenced Exhibit, and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)
10.14(c) *	<u>Third Amendment to Employment Agreement with Alyson S. Barclay, effective December 31, 2007</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed January 7, 2008</u>
		(Note: Third Amendment with Alyson S. Barclay is substantially identical to the referenced Exhibit except that (i) the termination amounts payable under Paragraph 9.a(1) are equal to base salary for 12 months and (ii) under Paragraph 9.a(1)(B), such termination amounts may be paid in biweekly installments equal to 1/26th of such amounts, and is therefore omitted as a separate exhibit pursuant to Rule 12b-31)
10.14(d) *	<u>Fourth Amendment to Employment Agreement with Alyson S. Barclay, effective July 29, 2010</u>	<u>Exhibit 10.1 to the Company's Form 8-K filed August 3, 2010</u>
21	<u>Subsidiaries of the Company</u>	<u>Filed herewith</u>
23	<u>Consent of Independent Registered Public Accounting Firm</u>	<u>Filed herewith</u>
31.1	<u>Certification of Chief Executive Officer</u>	<u>Filed herewith</u>
31.2	<u>Certification of Chief Financial Officer</u>	<u>Filed herewith</u>
32	<u>** Certification of Chief Executive Officer and Chief Financial Officer</u>	<u>Filed herewith</u>

101.INS \*\*\*XBRL Instance Document Submitted herewith  
101.SCH \*\*\*XBRL Schema Document Submitted herewith  
101.CAL \*\*\*XBRL Calculation  
Linkbase Document Submitted herewith  
101.LAB \*\*\*XBRL Label Linkbase  
Document Submitted herewith  
101.PRE \*\*\*XBRL Presentation  
Linkbase Document Submitted herewith  
101.DEF \*\*\*XBRL Definition Linkbase  
Document Submitted herewith

\*Indicates a management contract or compensatory plan or arrangement.

\*\*Furnished (and not filed) with the Commission pursuant to Item 601(b)(32)(ii) of Regulation S-K.

\*\*\*Exhibit 101 to this report consists of documents formatted in XBRL (Extensible Business Reporting Language).



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.

ESCO TECHNOLOGIES INC.

By: /s/ Victor L. Richey  
 Victor L. Richey  
 President and Chief Executive Officer

Date: November 29, 2017

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 in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Victor L. Richey Victor L. Richey	Chairman, President, Chief Executive Officer and Director	November 29, 2017
/s/ Gary E. Muenster Gary E. Muenster	Executive Vice President, Chief Financial Officer (Principal Accounting Officer) and Director	November 29, 2017
/s/ Patrick M. Dewar Patrick M. Dewar	Director	November 29, 2017
/s/ Vinod M. Khilnani Vinod M. Khilnani	Director	November 29, 2017
/s/ Leon J. Olivier Leon J. Olivier	Director	November 29, 2017

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/s/ Robert J.  
Phillippy            Director  
Robert J. Phillippy

November 29,  
2017

/s/ Larry W. Solley   Director  
Larry W. Solley

November 29,  
2017

/s/ James M. Stolze   Director  
James M. Stolze

November 29,  
2017

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**FINANCIAL INFORMATION**

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders  
ESCO Technologies Inc.:

We have audited the accompanying consolidated balance sheets of ESCO Technologies Inc. and subsidiaries (the Company) as of September 30, 2017 and 2016, and the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended September 30, 2017. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 30, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended September 30, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), ESCO Technologies Inc.'s internal control over financial reporting as of September 30, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated November 29, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

St. Louis, Missouri  
November 29, 2017

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**CONSOLIDATED STATEMENTS OF OPERATIONS**

(Dollars in thousands, except per share amounts)

Years ended September 30,	2017	2016	2015
Net sales	\$685,740	571,459	537,291
Costs and expenses:			
Cost of sales	436,918	350,807	334,850
Selling, general and administrative expenses	148,433	131,493	130,166
Amortization of intangible assets	16,338	11,630	8,850
Interest expense, net	4,578	1,308	785
Other (income) expenses, net	(680 )	7,801	1,119
Total costs and expenses	605,587	503,039	475,770
Earnings before income tax	80,153	68,420	61,521
Income tax expense	26,450	22,538	19,785
Net earnings from continuing operations	53,703	45,882	41,736
Earnings on sale from discontinued operations, net of tax expense of \$390 in 2015	–	–	776
Net earnings from discontinued operations	–	–	776
Net earnings	\$53,703	45,882	42,512
Earnings per share:			
Basic:			
Continuing operations	\$2.08	1.78	1.60
Discontinued operations	–	–	0.03
Net earnings	\$2.08	1.78	1.63
Diluted:			
Continuing operations	\$2.07	1.77	1.59
Discontinued operations	–	–	0.03
Net earnings	\$2.07	1.77	1.62
Average common shares outstanding (in thousands):			
Basic	25,774	25,762	26,077
Diluted	25,995	25,968	26,265

See accompanying Notes to Consolidated Financial Statements.

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**

(Dollars in thousands)

Years ended September 30,	2017	2016	2015
Net earnings	\$53,703	45,882	42,512
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	6,383	(1,462 )	(6,297 )

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Amortization of prior service costs and actuarial gains (losses)	5,573	(5,250 )	(6,961 )
Net unrealized gain (loss) on derivative instruments	19	(33 )	(94 )
Total other comprehensive income (loss), net of tax	11,975	(6,745 )	(13,352)
Comprehensive income	\$65,678	39,137	29,160

See accompanying Notes to Consolidated Financial Statements.

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**CONSOLIDATED BALANCE SHEETS**

(Dollars in thousands)

As of September 30,

	2017	2016
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$45,516	53,825
Accounts receivable, less allowance for doubtful accounts of \$2,030 and \$1,930 in 2017 and 2016, respectively	160,580	121,486
Costs and estimated earnings on long-term contracts, less progress billings of \$64,099 and \$31,129 in 2017 and 2016, respectively	47,286	28,746
Inventories	124,515	105,542
Other current assets	14,895	13,884
Total current assets	392,792	323,483
Property, plant and equipment:		
Land and land improvements	9,964	9,374
Buildings and leasehold improvements	88,469	62,822
Machinery and equipment	129,366	99,240
Construction in progress	4,599	5,423
	232,398	176,859
Less accumulated depreciation and amortization	(99,650 )	(84,454 )
Net property, plant and equipment	132,748	92,405
Intangible assets, net		
Goodwill	351,134	231,759
Other assets	377,879	323,616
	5,891	7,108
Total Assets	\$1,260,444	978,371

See accompanying Notes to Consolidated Financial Statements.

**CONSOLIDATED BALANCE SHEETS**

(Dollars in thousands)

As of September 30,

2017

2016

**LIABILITIES AND SHAREHOLDERS' EQUITY**

## Current liabilities:

Current maturities of long-term debt	\$20,000	20,000
Accounts payable	54,789	42,074
Advance payments on long-term contracts, less costs incurred of \$59,772 and \$35,266 in 2017 and 2016, respectively	22,451	16,187
Accrued salaries	32,259	28,769
Current portion of deferred revenue	28,583	27,212
Accrued other expenses	36,887	23,834
Total current liabilities	194,969	158,076

## Pension obligations

30,223 39,842

## Deferred tax liabilities

86,378 69,562

## Other liabilities

21,956 5,782

## Long-term debt

255,000 90,000

## Total liabilities

588,526 363,262

## Shareholders' equity:

Preferred stock, par value \$.01 per share, authorized 10,000,000 shares

Common stock, par value \$.01 per share, authorized 50,000,000 shares; issued 30,468,824 and 30,364,183 shares in 2017 and 2016, respectively

305 304

Additional paid-in capital

289,785 290,588

Retained earnings

516,718 471,272

Accumulated other comprehensive loss, net of tax

(27,308 ) (39,283 )

779,500 722,881

Less treasury stock, at cost (4,635,622 and 4,647,322 common shares in 2017 and 2016, respectively)

(107,582 ) (107,772)

Total shareholders' equity

671,918 615,109

Total Liabilities and Shareholders' Equity

\$1,260,444 978,371

See accompanying Notes to Consolidated Financial Statements.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Common Stock		Additional Paid-In	Retained	Accumulated Other Comprehensive Income (Loss)	Treasury	Total
	Shares	Amount	Capital	Earnings		Stock	
Balance, September 30, 2014	30,248	\$ 302	285,305	399,451	(19,186 )	(85,701 )	580,171
Comprehensive income (loss):							
Net earnings	—	—	—	42,512	—	—	42,512
Translation adjustments, net of tax of \$63	—	—	—	—	(6,297 )	—	(6,297 )
Net unrecognized actuarial loss, net of tax of \$3,979	—	—	—	—	(6,961 )	—	(6,961 )
Forward exchange contract, net of tax of \$35	—	—	—	—	(94 )	—	(94 )
Cash dividends declared (\$0.32 per share)	—	—	—	(8,331 )	—	—	(8,331 )
Stock options and stock compensation plans, net of tax of \$300	111	2	1,180	—	—	248	1,430
Purchases into treasury	—	—	—	—	—	(18,248 )	(18,248 )
Balance, September 30, 2015	30,359	\$ 304	286,485	433,632	(32,538 )	(103,701 )	584,182
Comprehensive income (loss):							
Net earnings	—	—	—	45,882	—	—	45,882
Translation adjustments, net of tax of \$383	—	—	—	—	(1,462 )	—	(1,462 )
Net unrecognized actuarial loss, net of tax of \$3,059	—	—	—	—	(5,250 )	—	(5,250 )
Forward exchange contract, net of tax of \$95	—	—	—	—	(33 )	—	(33 )
Cash dividends declared (\$0.32 per share)	—	—	—	(8,242 )	—	—	(8,242 )
Stock options and stock compensation plans, net of tax of \$18	5	—	4,103	—	—	232	4,335

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Purchases into treasury	—	—	—	—	—	(4,303 )	(4,303 )
Balance, September 30, 2016	30,364	\$ 304	290,588	471,272	(39,283 )	(107,772)	615,109
Comprehensive income (loss):							
Net earnings	—	—	—	53,703	—	—	53,703
Translation adjustments, net of tax of \$0	—	—	—	—	6,383	—	6,383
Net unrecognized actuarial gain, net of tax of \$(2,938)	—	—	—	—	5,573	—	5,573
Forward exchange contracts, net of tax of \$(66)	—	—	—	—	19	—	19
Cash dividends declared (\$0.32 per share)	—	—	—	(8,257 )	—	—	(8,257 )
Stock options and stock compensation plans, net of tax of \$0	105	1	(803 )	—	—	190	(612 )
Balance, September 30, 2017	30,469	\$ 305	289,785	516,718	(27,308 )	(107,582)	671,918

See accompanying Notes to Consolidated Financial Statements.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in thousands)

Years ended September 30,	2017	2016	2015
Cash flows from operating activities:			
Net earnings	\$53,703	45,882	42,512
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Net earnings from discontinued operations, net of tax	—	—	(776 )
Depreciation and amortization	32,229	23,568	18,584
Stock compensation expense	5,444	4,704	4,779
Changes in assets and liabilities	(17,889 )	1,746	(745 )
Effect of deferred taxes on tax provision	1,360	(2,993 )	1,417
Pension contributions	(2,677 )	—	(650 )
Other	(4,830 )	952	(144 )
Net cash provided by operating activities – continuing operations	67,340	73,859	64,977
Net cash provided by discontinued operations	—	—	776
Net cash provided by operating activities	67,340	73,859	65,753
Cash flows from investing activities:			
Acquisition of businesses, net of cash acquired	(198,628)	(82,062 )	(20,500 )
Capital expenditures	(29,728 )	(13,843 )	(12,444 )
Additions to capitalized software	(9,002 )	(8,665 )	(6,901 )
Proceeds from sale of land	1,184	—	—
Proceeds from life insurance	2,307	—	—
Net cash used by investing activities – continuing operations	(233,867)	(104,570)	(39,845 )
Net cash provided by investing activities – discontinued operations	—	—	—
Net cash used by investing activities	(233,867)	(104,570)	(39,845 )
Cash flows from financing activities:			
Proceeds from long-term debt	257,000	140,000	106,000
Principal payments on long-term debt	(92,000 )	(80,000 )	(96,000 )
Dividends paid	(8,257 )	(8,248 )	(8,369 )
Purchases of shares into treasury	—	(4,303 )	(18,248 )
Debt issuance costs	—	(1,097 )	—
Other	20	(128 )	(24 )
Net cash provided (used) by financing activities	156,763	46,224	(16,641 )
Effect of exchange rate changes on cash and cash equivalents	1,455	(1,099 )	(4,987 )
Net (decrease) increase in cash and cash equivalents	(8,309 )	14,414	4,280
Cash and cash equivalents at beginning of year	53,825	39,411	35,131
Cash and cash equivalents at end of year	\$45,516	53,825	39,411
Changes in assets and liabilities:			
Accounts receivable, net	\$(23,587 )	(9,088 )	3,848
Costs and estimated earnings on long-term contracts, net	(18,540 )	(359 )	(589 )
Inventories	3,959	1,101	(5,494 )
Other assets and liabilities	4,928	772	1,420
Accounts payable	8,735	(1,953 )	(2,496 )

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Advance payments on long-term contracts, net	6,264	(2,439 )	3,591
Accrued expenses	5,644	4,042	(7,045 )
Deferred revenue and costs, net	1,650	5,460	1,183
Pension obligations	(6,942 )	4,210	4,837
	\$(17,889 )	1,746	(745 )
Supplemental cash flow information:			
Interest paid	\$3,731	1,361	876
Income taxes paid (including state & foreign)	25,674	22,631	13,611

See accompanying Notes to Consolidated Financial Statements.

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### 1. Summary of Significant Accounting Policies

#### A. Principles of Consolidation

The Consolidated Financial Statements include the accounts of ESCO Technologies Inc. (ESCO) and its wholly owned subsidiaries (the Company). All significant intercompany transactions and accounts have been eliminated in consolidation.

#### B. Basis of Presentation

The Company's fiscal year ends September 30. Throughout these Consolidated Financial Statements, unless the context indicates otherwise, references to a year (for example 2017) refer to the Company's fiscal year ending on September 30 of that year. Certain prior period amounts have been reclassified to conform to the current period presentation.

The Company accounts for shipping and handling costs on a gross basis and they are included in net sales. The Company accounts for taxes collected from customers and remitted to governmental authorities on a net basis and they are excluded from net sales.

Aclara is reflected as discontinued operations in the consolidated financial statements and related notes for fiscal 2015, in accordance with accounting principles generally accepted in the United States of America (GAAP).

#### C. Nature of Operations

The Company is organized based on the products and services it offers, and classifies its business operations in segments for financial reporting purposes. Under the current organization structure, the Company has four segments for financial reporting purposes: Filtration/Fluid Flow (Filtration), RF Shielding and Test (Test), Utility Solutions Group (USG) and Technical Packaging.

**Filtration:** The companies within this segment primarily design and manufacture specialty filtration products including hydraulic filter elements and fluid control devices used in commercial aerospace applications, unique filter mechanisms used in micro-propulsion devices for satellites, custom designed filters for manned aircraft and submarines, elastomeric-based signature reduction solutions to enhance U.S. Navy maritime survivability, precision-tolerance machined components for the aerospace and defense industry, and metal processing services.

**Test:** ETS-Lindgren Inc. provides its customers with the ability to identify, measure and contain magnetic, electromagnetic and acoustic energy.

**USG:** The companies within this segment provide high-end, intelligent, diagnostic test and data management solutions for the electric power delivery industry, and decision support tools for the renewable energy industry, primarily wind.

**Technical Packaging:** The companies within this segment provide innovative solutions to the medical and commercial markets for thermoformed and precision molded pulp fiber packages and specialty products using a wide variety of thin gauge plastics and pulp.

#### D. Use of Estimates

The preparation of financial statements in conformity with GAAP requires Management to make estimates and assumptions that affect the reported amounts of assets and liabilities. Actual results could differ from those estimates.

#### E. Revenue Recognition

**Filtration:** Within the Filtration segment, approximately 86% of revenues (approximately 36% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers.



Approximately 14% of the segment's revenues (approximately 6% of consolidated revenues) are recorded under the percentage-of-completion method. The majority of these contracts are cost-reimbursable contracts which provide for the payment of allowable costs incurred during the performance of the contract plus an incentive fee. The remainder of the contracts are fixed-price contracts. Products accounted for under this guidance include the design, development and manufacture of complex fluid control products, quiet valves, manifolds and systems primarily for the aerospace and military markets. For fixed-price contracts that are accounted for under this guidance, the Company estimates profit as the difference between total estimated revenue and total estimated cost of a contract and recognizes these revenues and costs based on units delivered. The percentage-of-completion method of accounting involves the use of various techniques to estimate expected costs at completion. These estimates are based on Management's judgment and the Company's substantial experience in developing these types of estimates.

**Test:** Within the Test segment, approximately 30% of revenues (approximately 7% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers.

Approximately 70% of the segment's revenues (approximately 16% of consolidated revenues) are recorded under the percentage-of-completion method due to the complex nature of the enclosures that are designed and produced under these contracts. Products accounted for under this guidance include the construction and installation of complex test chambers to a buyer's specifications that provide its customers with the ability to measure and contain magnetic, electromagnetic and acoustic energy. As discussed above, for arrangements that are accounted for under this guidance, the Company estimates profit as the difference between total estimated revenue and total estimated cost of a contract and recognizes these revenues and costs based primarily on contract milestones. The percentage-of-completion method of accounting involves the use of various techniques to estimate expected costs at completion. These estimates are based on Management's judgment and the Company's substantial experience in developing these types of estimates.

**USG:** Within the USG segment, approximately 78% of revenues (approximately 18% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers), or when services are performed for unaffiliated customers. Approximately 22% of the segment's revenues (approximately 5% of consolidated revenues) are recognized on a straight-line basis over the lease term.

**Technical Packaging:** Within the Technical Packaging segment, 100% of revenues (approximately 12% of consolidated revenues) are recognized when products are delivered (when title and risk of ownership transfers) or when services are performed for unaffiliated customers.

#### F. Cash and Cash Equivalents

Cash equivalents include temporary investments that are readily convertible into cash, such as money market funds, with original maturities of three months or less.

#### G. Accounts Receivable

Accounts receivable have been reduced by an allowance for amounts that the Company estimates are uncollectible in the future. This estimated allowance is based on Management's evaluation of the financial condition of the customer and historical write-off experience.

#### H. Costs and Estimated Earnings on Long-Term Contracts

Costs and estimated earnings on long-term contracts represent unbilled revenues, including accrued profits, accounted for under the percentage-of-completion method, net of progress billings.

#### I. Inventories

Inventories are valued at the lower of cost (first-in, first-out) or market value. Inventories are regularly reviewed for excess quantities and obsolescence based upon historical experience, specific identification of discontinued items, future demand, and market conditions. Inventories under long-term contracts reflect accumulated production costs, factory overhead, initial tooling and other related costs less the portion of such costs charged to cost of sales.

#### J. Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation and amortization are computed primarily on a straight-line basis over the estimated useful lives of the assets: buildings, 10-40 years; machinery and equipment, 3-10 years; and office furniture and equipment, 3-10 years. Leasehold improvements are amortized over the remaining term of the applicable lease or their estimated useful lives, whichever is shorter. Long-lived tangible assets are reviewed for impairment whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable. Impairment losses are recognized based on fair value.

#### K. Leases

Lease agreements are evaluated to determine whether they are capital or operating leases in accordance with ASC 840, *Leases* (ASC 840). When any one of the four test criteria in ASC 840 is met, the lease then qualifies as a capital lease. Capital leases are capitalized at the lower of the net present value of the total amount payable under the leasing agreement (excluding finance charges) or the fair market value of the leased asset. Capital lease assets are depreciated on a straight-line basis, over a period consistent with the Company's normal depreciation policy for tangible fixed assets. The Company allocates each lease payment between a reduction of the lease obligation and interest expense using the effective interest method. Rent expense for operating leases, which may include free rent or fixed escalation amounts in addition to minimum lease payments, is recognized on a straight-line basis over the duration of the lease term. Capital lease obligations are included within other long-term liabilities (long-term portion) and accrued other expenses (current portion).

#### L. Goodwill and Other Long-Lived Assets

Goodwill represents the excess of purchase price over the fair value of net identifiable assets acquired in business acquisitions. Management annually reviews goodwill and other long-lived assets with indefinite useful lives for impairment or whenever events or changes in circumstances indicate the carrying amount may not be recoverable. If the Company determines that the carrying value of the long-lived asset may not be recoverable, a permanent impairment charge is recorded for the amount by which the carrying value of the long-lived asset exceeds its fair value. Fair value is measured based on a discounted cash flow method using a discount rate determined by Management to be commensurate with the risk inherent in the Company's current business model.

Other intangible assets represent costs allocated to identifiable intangible assets, principally customer relationships, capitalized software, patents, trademarks, and technology rights. Intangible assets with estimable useful lives are amortized over their respective estimated useful lives to their estimated residual values, and are reviewed for impairment whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable. See Note 3 regarding goodwill and other intangible assets activity.

#### M. Capitalized Software

The costs incurred for the development of computer software that will be sold, leased, or otherwise marketed are charged to expense when incurred as research and development until technological feasibility has been established for the product. Technological feasibility is typically established upon completion of a detailed program design. Costs incurred after this point are capitalized on a project-by-project basis. Capitalized costs consist of internal and external development costs. Upon general release of the product to customers, the Company ceases capitalization and begins amortization, which is calculated on a project-by-project basis as the greater of (1) the ratio of current gross revenues for a product to the total of current and anticipated future gross revenues for the product or (2) the straight-line method

over the estimated economic life of the product. The Company generally amortizes the software development costs over a three-to-seven year period based upon the estimated future economic life of the product. Factors considered in determining the estimated future economic life of the product include anticipated future revenues, and changes in software and hardware technologies. Management annually reviews the carrying values of capitalized costs for impairment or whenever events or changes in circumstances indicate the carrying amount may not be recoverable. If expected cash flows are insufficient to recover the carrying amount of the asset, then an impairment loss is recognized to state the asset at its net realizable value.

#### N. 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. 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. Deferred tax assets may be reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax assets will not be realized. 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. The Company regularly reviews its deferred tax assets for recoverability and establishes a valuation allowance when Management believes it is more likely than not such assets will not be recovered, taking into consideration historical operating results, expectations of future earnings, tax planning strategies, and the expected timing of the reversals of existing temporary differences.

#### O. Research and Development Costs

Company-sponsored research and development costs include research and development and bid and proposal efforts related to the Company's products and services. Company-sponsored product development costs are charged to expense when incurred. Customer-sponsored research and development costs incurred pursuant to contracts are accounted for similarly to other program costs. Customer-sponsored research and development costs refer to certain situations whereby customers provide funding to support specific contractually defined research and development costs. Total Company and customer-sponsored research and development expenses were approximately \$14.0 million, \$12.2 million and \$18.1 million for 2017, 2016 and 2015, respectively. These expense amounts exclude certain engineering costs primarily associated with product line extensions, modifications and maintenance, which amounted to approximately \$10.4 million, \$8.2 million and \$8.2 million for 2017, 2016 and 2015, respectively.

#### P. Foreign Currency Translation

The financial statements of the Company's foreign operations are translated into U.S. dollars in accordance with FASB ASC Topic 830, *Foreign Currency Matters*. The resulting translation adjustments are recorded as a separate component of accumulated other comprehensive income.

#### Q. Earnings Per Share

Basic earnings per share is calculated using the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated using the weighted average number of common shares outstanding during the period plus shares issuable upon the assumed exercise of dilutive common share options and vesting of performance-accelerated restricted shares using the treasury stock method. There are no anti-dilutive shares.

The number of shares used in the calculation of earnings per share for each year presented is as follows:

(in thousands)	2017	2016	2015
Weighted Average Shares Outstanding — Basic	25,774	25,762	26,077
Performance- Accelerated Restricted Stock	221	206	188
Shares — Diluted	25,995	25,968	26,265

#### R. Share-Based Compensation

The Company provides compensation benefits to certain key employees under several share-based plans providing for employee stock options and/or performance-accelerated restricted shares (restricted shares), and to non-employee directors under a non-employee directors compensation plan. Share-based payment expense is measured at the grant date based on the fair value of the award and is recognized on a straight-line basis over the requisite service period (generally the vesting period of the award).

#### S. Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss of \$(27.3) million at September 30, 2017 consisted of \$(28.9) million related to the pension net actuarial loss; \$1.7 million related to currency translation adjustments; and \$(0.1) million related to forward exchange contracts. Accumulated other comprehensive loss of \$(39.3) million at September 30, 2016 consisted of \$(34.5) million related to the pension net actuarial loss; \$(4.7) million related to currency translation adjustments; and \$(0.1) million related to forward exchange contracts.

#### T. Deferred Revenue And Costs

Deferred revenue and costs are recorded when products or services have been provided or cash has been received but the criteria for revenue recognition have not been met. If there is a customer acceptance provision or there is uncertainty about customer acceptance, revenue and costs are deferred until the customer has accepted the product or service.

#### U. Derivative Financial Instruments

All derivative financial instruments are reported on the balance sheet at fair value. The accounting for changes in fair value of a derivative instrument depends on whether it has been designated and qualifies as a hedge and on the type of hedge. For each derivative instrument designated as a cash flow hedge, the effective portion of the gain or loss on the derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item. For each derivative instrument designated as a fair value hedge, the gain or loss on the derivative and the offsetting gain or loss on the hedged item are recognized immediately in earnings. Regardless of type, a fully effective hedge will result in no net earnings impact while the derivative is outstanding. To the extent that any hedge is ineffective at offsetting cash flow or fair value changes in the underlying hedged item, there could be a net earnings impact.

## V. Fair Value Measurements

Fair value is defined as the price at which an asset could be exchanged in a current transaction between knowledgeable, willing parties or the amount that would be paid to transfer a liability to a new obligor, not the amount that would be paid to settle the liability with the creditor. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve some level of Management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

The accounting guidance establishes a three-level hierarchy for disclosure of fair value measurements, based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date, as follows:

Level 1 – Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 – Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active 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 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

### Financial Assets and Liabilities

The Company has estimated the fair value of its financial instruments as of September 30, 2017 using available market information or other appropriate valuation methodologies. The carrying amounts of cash and cash equivalents, receivables, inventories, payables and other current assets and liabilities approximate fair value because of the short maturity of those instruments. The carrying amounts due under the revolving credit facility approximate fair value as the interest on outstanding borrowings is calculated at a spread over the London Interbank Offered Rate (LIBOR) or based on the prime rate, at the Company's election.

### Nonfinancial Assets and Liabilities

The Company's nonfinancial assets such as property, plant and equipment, and other intangible assets are not measured at fair value on a recurring basis; however they are subject to fair value adjustments in certain circumstances, such as when there is evidence that an impairment may exist. No impairments were recorded during 2017.

#### W. New Accounting Standards

In January 2017, the FASB issued Accounting Standards Update (ASU) No. 2017-04, *Simplifying the Test for Goodwill Impairment* (ASU 2017-04), which eliminates Step 2 from the goodwill impairment test. Under the amendments in this update, an entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The new standard is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment test performed on testing dates after January 1, 2017. The Company adopted this standard in the fourth quarter of 2017 with its annual goodwill impairment tests. The adoption of ASU 2017-04 did not have an impact on the Company's consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which simplified the income tax consequences, accounting for forfeitures and classification on the Statements of Consolidated Cash Flows. The Company adopted this standard in the current year resulting in the income tax expense in the third quarter and fiscal year 2017 being favorably impacted by additional tax benefits on share-based compensation that vested during the third quarter of 2017 decreasing the effective tax rate by 5.1% and 1.1%, respectively.



In February 2016, the FASB issued ASU No. 2016-062, *Leases (Topic 842)*, which, among other things, requires an entity to recognize lease assets and lease liabilities on the balance sheet and disclose key information about leasing arrangements. This new standard will increase an entity's reported assets and liabilities. The new standard is effective for fiscal years beginning after December 15, 2018 and mandates a modified retrospective transition period for all entities. The Company is currently assessing the impact of this new standard on its consolidated financial statements and related disclosures.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes*, which requires entities to present deferred tax assets and deferred tax liabilities as noncurrent in a classified balance sheet. This new standard is effective for annual periods beginning after December 15, 2016. The Company adopted this standard during the fourth quarter of 2016 and applied it on a prospective basis.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. This guidance has been further clarified and amended. The new standard will be effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is currently in the process of calculating the effect that ASU 2014-09 will have on its consolidated financial statements and related disclosures. The Company has selected the Cumulative Effect method of transition to the new standard.

## **2. Acquisitions**

### **2017**

On August 30, 2017, the Company acquired the assets of Vanguard Instruments Company (Vanguard Instruments), a test equipment provider serving the global electric utility market, located in Ontario, California, for a purchase price of \$36.0 million in cash. Vanguard Instruments has annualized sales of approximately \$14 million. Since the date of acquisition, the operating results for Vanguard Instruments have been included as a product line of Doble within the Company's USG segment. Based on the preliminary purchase price allocation, the Company recorded approximately \$1.8 million of accounts receivable, \$2.1 million of inventory, \$0.3 million of property, plant and equipment, \$0.2 million of accounts payable and accrued expenses, \$10.7 million of goodwill, \$3.2 million of tradenames and \$18.0 million of amortizable intangible assets consisting of customer relationships with a weighted average life of 15 years.

On May 25, 2017, the Company acquired the assets of Morgan Schaffer Inc. (Morgan Schaffer), a global utilities provider located in Montreal, Quebec, Canada, for a purchase price of \$48.8 million in cash. Morgan Schaffer has

annualized sales of approximately \$25 million. It designs, develops, manufactures and markets an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers. Since the date of acquisition, the operating results for Morgan Schaffer have been included in the Company's USG segment. Based on the preliminary purchase price allocation, the Company recorded approximately \$2.5 million of accounts receivable, \$5.2 million of inventory, \$1.7 million of property, plant and equipment, \$0.4 million of other assets, \$4.9 million of accounts payable and accrued expenses, \$4.8 million of goodwill, \$35.6 million of trade names and \$3.6 million of amortizable intangible assets consisting of customer relationships and developed technology with a weighted average life of approximately 10 years.

On May 8, 2017, the Company acquired NRG Systems, Inc. (NRG), located in Hinesburg, Vermont, for a purchase price of \$38.6 million in cash. NRG is the global market leader in the design and manufacture of decision support tools for the renewable energy industry, primarily wind. NRG has annualized sales of approximately \$45 million. Since the date of acquisition, the operating results for NRG have been included in the Company's USG segment. Based on the preliminary purchase price allocation, the Company recorded approximately \$1.5 million of cash, \$4.1 million of accounts receivable, \$5.1 million of inventory, \$1.0 million of other assets, \$9.4 million of property, plant and equipment (including a capital lease), \$4.1 million of accounts payable and accrued expenses, \$9.7 million of lease liability, \$8.0 million of goodwill, \$8.1 million of trade names and \$17.2 million of amortizable intangible assets consisting of customer relationships with a weighted average life of approximately 14 years.

On November 7, 2016, the Company acquired aerospace suppliers Mayday Manufacturing Co. (Mayday) and its affiliate, Hi-Tech Metals, Inc. (Hi-Tech), which share a state-of-the-art, expandable 130,000 square foot facility in Denton, Texas, for a purchase price of approximately \$75 million in cash. Mayday is a leading manufacturer of mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls and actuation systems for the aerospace and defense industry. Hi-Tech is a full-service metal processor offering aerospace OEM's and Tier 1 suppliers a large portfolio of processing services including anodizing, cadmium and zinc-nickel plating, organic coatings, non-destructive testing and heat treatment. Mayday and Hi-Tech together have annual sales of approximately \$40 million. Since the date of acquisition, the consolidated operating results for Mayday and Hi-Tech have been included in the Company's Filtration segment. Based on the purchase price allocation, the Company recorded approximately \$7.3 million of accounts receivable, \$10.6 million of inventory, \$16.6 million of property, plant and equipment (including a capital lease), \$10.1 million of lease liability, \$15.6 million of deferred tax liabilities, \$30.2 million of goodwill, \$4.8 million of trade names and \$32.8 million of amortizable identifiable intangible assets consisting primarily of customer relationships with a weighted-average life of approximately 20 years.

## **2016**

On September 2, 2016, the Company acquired the stock of Westland Technologies, Inc. (Westland), located in Modesto, California, for a purchase price of approximately \$41 million in cash. Westland is a market leader in the design, development and manufacture of elastomeric-based signature reduction solutions which enhance U.S. Naval maritime platform survivability. Westland has annual sales of approximately \$25 million. Since the date of acquisition, the operating results for Westland have been included within the Company's Filtration segment. Based on the purchase price allocation, the Company recorded tangible assets, net, of \$5.5 million, deferred tax liabilities of \$9.5 million, goodwill of \$17.9 million, and \$28.3 million of identifiable intangible assets primarily consisting of customer relationships.

On January 29, 2016, the Company acquired Plastique Limited and Plastique Sp. z o.o. (together, Plastique), headquartered in Tunbridge Wells, England with manufacturing locations in Nottingham, England and Poznan, Poland, for a purchase price of approximately \$31.6 million (of which \$2.7 million is due over the next two years, one payment in January 2018 and one in January 2019). Plastique is a market leader in the development and manufacture of highly-technical thermoformed plastic and precision molded pulp fiber packaging primarily serving pharmaceutical, personal care, and various specialty end markets. Since the date of acquisition, the operating results for Plastique have been included within the Company's Technical Packaging segment. Plastique has annual sales of approximately \$35 million. Based on the purchase price allocation, the Company recorded tangible assets, net, of \$9.6 million, goodwill of \$10.2 million, and \$11.9 million of identifiable intangible assets primarily consisting of customer relationships.

On October 16, 2015, the Company acquired the stock of Fremont Plastics, Inc. (Fremont) for a purchase price of \$10.5 million in cash. The Company also purchased for \$2 million Fremont's real property located in Fremont,

Indiana. Fremont was a developer, manufacturer, promoter and seller of high quality sterile-ready and non-sterile thin gauge thermoformed medical plastic packaging products. Immediately following the closing of the transaction, Fremont was merged into TEQ, and therefore since the date of acquisition the operating results for Fremont have been included as part of TEQ.

## 2015

On January 28, 2015, the Company acquired the assets of Enoserv LLC (Enoserv), headquartered in Tulsa, Oklahoma, for \$20.5 million in cash. Enoserv provides utility customers with high quality, user-friendly multi-platform software and has annual revenues of approximately \$8 million. Since the date of acquisition the operating results for Enoserv have been included as part of Doble within the Company's USG segment. Based on the purchase price allocation, the Company recorded approximately \$10.0 million of goodwill and \$9.0 million of amortizable identifiable intangible assets consisting primarily of customer relationships and developed technology.

All of the Company's acquisitions have been accounted for using the purchase method of accounting and accordingly, the respective purchase prices were allocated to the assets (including intangible assets) acquired and liabilities assumed based on estimated fair values at the date of acquisition. The financial results from these acquisitions have been included in the Company's financial statements from the date of acquisition.

Unaudited pro forma sales and earnings before tax were \$746.0 million and \$84.5 million, respectively, for 2017, and \$695.0 million and \$76.2 million, respectively, for 2016. These pro forma amounts reflect the Company's consolidated results of operations as if the 2017 acquisitions of Vanguard Instruments, Morgan Schaffer, NRG and Mayday had occurred on October 1, 2015. The pro forma financial information was prepared based on historical financial information and has been adjusted to give effect to pro forma adjustments that are (i) directly attributable to the above acquisitions, (ii) factually supportable and (iii) expected to have a continuing impact on the combined results. The pro forma information uses estimates and assumptions based on information available at the time. Management believes the estimates and assumptions to be reasonable; however, actual results may differ significantly from this pro forma information. The pro forma information is not intended to reflect the actual results that would have occurred had the companies actually been combined during the periods presented. The pro forma results for the years ended September 30, 2017 and 2016 primarily include additional amortization expense related to the fair value of acquired identifiable intangible assets and additional interest expense related to the incremental debt issued in conjunction with the 2017 acquisitions. The pro forma results for the year ended September 30, 2017 also included non-recurring adjustments of \$3.8 million related to additional costs of goods sold due to the increase of inventory to fair value at the acquisition date in connection with the preliminary purchase accounting for inventory.

The goodwill recorded for the Mayday, Westland, Plastique and Fremont acquisitions mentioned above is not expected to be deductible for U.S. Federal or state income tax purposes. The goodwill recorded for the Vanguard Instruments, NRG and Enoserv acquisitions mentioned above is expected to be deductible for U.S. Federal and state income tax purposes. The goodwill recorded for the Morgan Schaffer acquisition is expected to be deductible for Canadian income tax purposes.

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## 3. Goodwill and Other Intangible Assets

Included on the Company's Consolidated Balance Sheets at September 30, 2017 and 2016 are the following intangible assets gross carrying amounts and accumulated amortization:

(Dollars in millions)	2017	2016
Goodwill	\$377.9	323.6
Intangible assets with determinable lives:		
Patents		
Gross carrying amount	\$1.0	1.0
Less: accumulated amortization	0.8	0.8
Net	\$0.2	0.2
Capitalized software		
Gross carrying amount	\$63.0	54.0
Less: accumulated amortization	34.4	26.7
Net	\$28.6	27.3
Customer Relationships		
Gross carrying amount	\$181.9	111.9
Less: accumulated amortization	37.4	28.6
Net	\$144.5	83.3
Other		
Gross carrying amount	\$5.4	2.8
Less: accumulated amortization	1.4	0.9
Net	\$4.0	1.9
Intangible assets with indefinite lives:		
Trade names	\$173.8	119.1

The Company performed its annual evaluation of goodwill and intangible assets for impairment during the fourth quarter of 2017 and concluded no impairment existed at September 30, 2017 and there are no accumulated impairment losses as of September 30, 2017.

The changes in the carrying amount of goodwill attributable to each business segment for 2017 and 2016 are as follows:

(Dollars in millions)	Filtration	Test	USG	Total
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				Technical Packaging	
Balance as of September 30, 2015	\$ 26.0	34.2	226.2	4.8	291.2
Acquisition activity	17.9	–	–	14.5	32.4
Foreign currency translation and other	–	(0.1 )	–	0.1	–
Balance as of September 30, 2016	43.9	34.1	226.2	19.4	323.6
Acquisition activity	29.8	–	23.6	–	53.4
Foreign currency translation and other	–	–	0.4	0.5	0.9
Balance as of September 30, 2017	\$ 73.7	34.1	250.2	19.9	377.9

Amortization expense related to intangible assets with determinable lives was \$16.3 million, \$11.6 million and \$8.9 million in 2017, 2016 and 2015, respectively. Patents are amortized over the life of the patents, generally 17 years. Capitalized software is amortized over the estimated useful life of the software, generally three to seven years. Customer relationships are generally amortized over fifteen to twenty years. Intangible asset amortization for fiscal years 2018 through 2022 is estimated at approximately \$20 million per year.

#### 4. Accounts Receivable

Accounts receivable, net of the allowance for doubtful accounts, consist of the following at September 30, 2017 and 2016:

(Dollars in thousands)	2017	2016
Commercial	\$152,265	112,280
U.S. Government and prime contractors	8,315	9,206
Total	\$160,580	121,486

#### 5. Inventories

Inventories consist of the following at September 30, 2017 and 2016:

(Dollars in thousands)	2017	2016
Finished goods	\$28,127	20,502
Work in process	43,750	37,922
Raw materials	52,638	47,118
Total	\$124,515	105,542

#### 6. Related Parties

One of the Company's directors is an officer at a customer of the Company's subsidiary Doble. Doble sells products, leases equipment and provides testing services to the customer in the ordinary course of Doble's business. The total amount of these sales were approximately \$3.6 million, \$1.4 million and \$0.8 million during fiscal 2017, 2016 and 2015, respectively. All transactions between Doble and the customer are intended to be and have been consistent with Doble's normal commercial terms offered to its customers, and the Company's Board of Directors has determined that the relationship between the Company and the customer is not material and did not impair either the Company's or the director's independence.

#### 7. Income Tax Expense

Total income tax expense (benefit) for 2017, 2016 and 2015 was allocated to income tax expense as follows:



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(Dollars in thousands)	2017	2016	2015
Income tax expense from Continuing Operations	\$26,450	22,538	19,785
Income tax expense from Discontinued Operations	–	–	390
Total income tax expense	\$26,450	22,538	20,175

The components of income from continuing operations before income taxes for 2017, 2016 and 2015 consisted of the following:

(Dollars in thousands)	2017	2016	2015
United States	\$72,353	62,353	56,661
Foreign	7,800	6,067	4,860
Total income before income taxes	\$80,153	68,420	61,521

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The principal components of income tax expense (benefit) from continuing operations for 2017, 2016 and 2015 consist of:

(Dollars in thousands)	2017	2016	2015
Federal:			
Current	\$21,448	19,236	11,906
Deferred	628	(909 )	5,406
State and local:			
Current	1,795	1,674	867
Deferred	(49 )	(222 )	16
Foreign:			
Current	4,450	1,899	1,525
Deferred	(1,822 )	860	65
Total	\$26,450	22,538	19,785

The actual income tax expense (benefit) from continuing operations for 2017, 2016 and 2015 differs from the expected tax expense for those years (computed by applying the U.S. Federal corporate statutory rate) as follows:

	2017	2016	2015
Federal corporate statutory rate	35.0%	35.0%	35.0%
State and local, net of Federal benefits	2.4	2.0	1.2
Foreign	(0.1 )	(1.0 )	(1.5 )
Research credit	(1.1 )	(2.5 )	(1.8 )
Domestic production deduction	(2.7 )	(2.8 )	(2.6 )
Change in uncertain tax positions	—	—	(0.2 )
Executive compensation	(0.1 )	0.9	0.9
Valuation allowance	(0.3 )	1.8	1.0
Other, net	(0.1 )	(0.5 )	0.2
Effective income tax rate	33.0%	32.9%	32.2%

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities at September 30, 2017 and 2016 are presented below:

(Dollars in thousands)	2017	2016
Deferred tax assets:		
Inventories	\$9,639	7,553
Pension and other postretirement benefits	11,345	13,978
Net operating and capital loss carryforwards — domestic	501	372
Net operating loss carryforward — foreign	4,486	4,991

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Other compensation-related costs and other cost accruals	12,104	13,678
State credit carryforward	2,098	1,944
Total deferred tax assets	40,173	42,516
Deferred tax liabilities:		
Goodwill	(4,874 )	(15,528)
Acquisition assets	(91,752)	(69,934)
Depreciation, software amortization	(24,092)	(20,285)
Net deferred tax liabilities before valuation allowance	(80,545)	(63,231)
Less valuation allowance	(4,440 )	(5,711 )
Net deferred tax liabilities	\$(84,985)	(68,942)

The Company has a foreign net operating loss (NOL) carryforward of \$18.2 million at September 30, 2017, which reflects tax loss carryforwards in Germany, India, Finland, China, South Africa, Japan, Canada and the United Kingdom. \$15.0 million of the tax loss carryforwards have no expiration date while the remaining \$3.2 million will expire between 2019 and 2038. The Company has deferred tax assets related to state NOL carryforwards of \$0.5 million at September 30, 2017 which expire between 2025 and 2037. The Company also has net state research and other credit carryforwards of \$2.1 million of which \$1.7 million expires between 2025 and 2037. The remaining \$0.4 million does not have an expiration date.

The valuation allowance for deferred tax assets as of September 30, 2017 and 2016 was \$4.4 million and \$5.7 million, respectively. The net change in the total valuation allowance for each of the years ended September 30, 2017 and 2016 was a decrease of \$1.3 million and an increase of \$1.6 million, respectively. The Company has established a valuation allowance against state credit carryforwards of \$0.4 million and \$0.6 million at September 30, 2017 and 2016. In addition, the Company has established a valuation allowance against state NOL carryforwards that are not expected to be realized in future periods of \$0.4 million and \$0.3 million at September 30, 2017 and 2016. Lastly, the Company has established a valuation allowance against certain NOL carryforwards in foreign jurisdictions which may not be realized in future periods. The valuation allowance established against the foreign NOL carryforwards was \$3.7 million and \$4.8 million at September 30, 2017 and 2016, respectively.

ETS-Lindgren Oy, Finland, has recorded a deferred tax asset of \$0.3 million reflecting the benefit of \$2.8 million in loss carryforwards, which expire in varying amounts between 2024 and 2027. Realization is dependent on generating sufficient taxable income prior to expiration of the loss carryforwards. Although realization is not assured, Management believes it is more likely than not that all of the deferred tax asset will be realized. The amount of the deferred tax asset considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

The Company's foreign subsidiaries have accumulated unremitted earnings of \$48.9 million and cash of \$28.4 million at September 30, 2017. No deferred taxes have been provided on these accumulated unremitted earnings because these funds are not needed to meet the liquidity requirements of the Company's U.S. operations and it is the Company's intention to indefinitely reinvest these earnings in continuing international operations. In the event these foreign entities' earnings were distributed, it is estimated that U.S. taxes, net of available foreign tax credits, of approximately \$6.9 million would be due, which would correspondingly reduce the Company's net earnings. No significant portion of the Company's foreign subsidiaries' earnings was taxed at a very low tax rate.

The Company had \$0.1 million of unrecognized benefits as of both September 30, 2017 and 2016, which, if recognized, would affect the Company's effective tax rate. The Company does not anticipate a material change in the amount of unrecognized tax benefits in the next 12 months. The Company's policy is to include interest related to unrecognized tax benefits in income tax expense and penalties in operating expense. As of September 30, 2017, 2016 and 2015, the Company had zero accrued interest related to uncertain tax positions on its Consolidated Balance Sheets. No significant penalties have been accrued.

The principal jurisdictions for which the Company files income tax returns are U.S. Federal and the various city, state, and international locations where the Company has operations. The U.S. Federal tax years for the periods ended September 30, 2014 and forward remain subject to income tax examination. Various state tax years for the periods ended September 30, 2013 and forward remain subject to income tax examinations. The Company is subject to income tax in many jurisdictions outside the United States, none of which is individually significant.

**8. Debt**

Debt consists of the following at September 30, 2017 and 2016:

(Dollars in thousands)	2017	2016
Revolving credit facility, including current portion	\$275,000	110,000
Current portion of long-term debt	(20,000 )	(20,000 )
Total long-term debt, less current portion	\$255,000	90,000

The Company's existing credit facility ("the Credit Facility") matures December 21, 2020. The Credit Facility includes a \$450 million revolving line of credit as well as provisions allowing for the increase of the credit facility commitment amount by an additional \$250 million, if necessary, with the consent of the lenders. The bank syndication supporting the facility is comprised of a diverse group of nine banks led by JP Morgan Chase Bank, N.A., as Administrative Agent.

At September 30, 2017, the Company had approximately \$166 million available to borrow under the Credit Facility, plus the \$250 million increase option, in addition to \$45.5 million cash on hand. The Company classified \$20.0 million as the current portion of long-term debt as of September 30, 2017, as the Company intends to repay this amount within the next twelve months; however, the Company has no contractual obligation to repay such amount during the next twelve months.

The Credit Facility requires, as determined by certain financial ratios, a facility fee ranging from 12.5 to 27.5 basis points per annum on the unused portion. The terms of the facility provide that interest on borrowings may be calculated at a spread over the London Interbank Offered Rate (LIBOR) or based on the prime rate, at the Company's election. The facility is secured by the unlimited guaranty of the Company's material domestic subsidiaries and a 65% pledge of its material foreign subsidiaries' share equity. The financial covenants of the Credit Facility include a leverage ratio and an interest coverage ratio. As of September 30, 2017, the Company was in compliance with all bank covenants.

During 2017 and 2016, the maximum aggregate short-term borrowings at any month-end were \$298 million and \$110 million, respectively, and the average aggregate short-term borrowings outstanding based on month-end balances were \$211.3 million and \$89.2 million, respectively. The weighted average interest rates were 2.09%, 1.58% and 1.27% for 2017, 2016 and 2015, respectively. The letters of credit issued and outstanding under the Credit Facility totaled \$9.7 million and \$4.9 million at September 30, 2017 and 2016, respectively.

## **9. Capital Stock**

The 30,468,824 and 30,364,183 common shares as presented in the accompanying Consolidated Balance Sheets at September 30, 2017 and 2016 represent the actual number of shares issued at the respective dates. The Company held 4,635,622 and 4,647,322 common shares in treasury at September 30, 2017 and 2016, respectively.

In August 2012, the Company's Board of Directors authorized a common stock repurchase program under which the Company may repurchase shares of its stock from time to time in its discretion, in the open market or otherwise, up to a maximum total repurchase amount of \$100 million (or such lesser amount as may be permitted under the Company's bank credit agreements). This program has been repeatedly extended by the Company's Board of Directors and is currently scheduled to expire September 30, 2019. There were no share repurchases in 2017. The Company repurchased approximately 120,000 shares for \$4.3 million in 2016 and 517,000 shares for \$18.2 million in 2015.

## **10. Share-Based Compensation**

The Company provides compensation benefits to certain key employees under several share-based plans providing for performance-accelerated restricted share unit (PARS) awards, and to non-employee directors under a non-employee directors compensation plan. The Company has no stock options currently outstanding. As of September 30, 2017, the Company had 1,072,401 shares available for future issuance under equity compensation plans.

### **Performance-Accelerated Restricted Share Unit Awards**

A PARS award represents the right to receive a specified number of shares of Company common stock if and when the award vests. A PARS award is not stock and does not give the recipient any rights as a shareholder until it vests and is paid out in shares of stock. PARS awards currently outstanding have a five-year vesting period, with accelerated vesting if certain targets based on market conditions are achieved. In these cases, if it is probable that the performance condition will be met, the Company recognizes compensation cost on a straight-line basis over the shorter performance period; otherwise, it will recognize compensation cost over the longer service period. Compensation cost for the majority of the outstanding PARS awards is being recognized over the shorter performance period as it is probable the performance condition will be met. The PARS award grants were valued at the stock price on the date of grant. Pretax compensation expense related to the PARS awards for continuing operations was \$4.4 million, \$3.9 million and \$4.0 million for 2017, 2016 and 2015, respectively.

The following summary presents information regarding outstanding PARS awards as of the specified dates, and changes during the specified periods:

	FY 2017		FY 2016		FY 2015	
	Shares	Estimated Weighted Avg. Price	Shares	Estimated Weighted Avg. Price	Shares	Estimated Weighted Avg. Price
Nonvested at October 1,	427,438	\$ 35.40	326,536	\$ 35.29	332,340	\$ 32.23
Granted	110,422	51.16	120,902	35.75	123,501	34.33
Vested	(202,035)	35.78	(8,000 )	36.06	(129,305)	26.66
Cancelled	—	—	(12,000 )	35.47	—	—
Nonvested at September 30,	335,825	\$ 40.35	427,438	\$ 35.40	326,536	\$ 35.29

**Non-Employee Directors Plan**

In 2017 the non-employee directors compensation plan provided to each non-employee director a retainer of 900 common shares per quarter. Non-employee director grants were valued at the stock price on the date of grant and were issued from the Company's treasury stock. Compensation expense related to the non-employee director grants was \$1.0 million, \$0.8 million and \$0.8 million for 2017, 2016 and 2015, respectively.

**Total Share-Based Compensation**

The total share-based compensation cost that has been recognized in results of operations and included within SG&A from continuing operations was \$5.4 million, \$4.7 million and \$4.8 million for 2017, 2016 and 2015, respectively. The total income tax benefit recognized in results of operations for share-based compensation arrangements was \$1.8 million, \$1.3 million and \$1.6 million for 2017, 2016 and 2015, respectively. As of September 30, 2017, there was \$6.3 million of total unrecognized compensation cost related to share-based compensation arrangements. That cost is expected to be recognized over a weighted-average period of 1.5 years.

**11. Retirement and Other Benefit Plans**

Substantially all domestic employees were covered by a defined contribution pension plan maintained by the Company. Effective December 31, 2003, the Company's defined benefit plan was frozen and no additional benefits have been accrued after that date. As a result, the accumulated benefit obligation and projected benefit obligation are equal. These frozen retirement income benefits are provided to employees under defined benefit pay-related and flat-dollar plans, which are noncontributory. The annual contributions to the defined benefit retirement plan equal or exceed the minimum funding requirements of the Employee Retirement Income Security Act. In addition to providing retirement income benefits, the Company provides unfunded postretirement health and life insurance benefits to certain retirees. To qualify, an employee must retire at age 55 or later and the employee's age plus service must equal or exceed 75. Retiree contributions are defined as a percentage of medical premiums. Consequently, retiree contributions increase with increases in the medical premiums. The life insurance plans are noncontributory and provide coverage of a flat dollar amount for qualifying retired employees. Effective December 31, 2004, no new retirees were eligible for life insurance benefits.

The Company uses a measurement date of September 30 for its pension and other postretirement benefit plans. The Company has an accrued benefit liability of \$0.6 million and \$0.7 million at September 30, 2017 and 2016, respectively, related to its other postretirement benefit obligations. All other information related to its postretirement benefit plans is not considered material to the Company's results of operations or financial condition.



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The following tables provide a reconciliation of the changes in the pension plans and fair value of assets over the two-year period ended September 30, 2017, and a statement of the funded status as of September 30, 2017 and 2016:

(Dollars in millions)

	2017	2016
Reconciliation of benefit obligation		
Net benefit obligation at beginning of year	\$100.6	93.6
Interest cost	3.2	3.9
Actuarial (gain) loss	(4.1 )	11.1
Gross benefits paid	(4.4 )	(7.8 )
Settlements	–	(0.2 )
Net benefit obligation at end of year	\$95.3	100.6

(Dollars in millions)

	2017	2016
Reconciliation of fair value of plan assets		
Fair value of plan assets at beginning of year	\$60.6	63.0
Actual return on plan assets	5.9	5.1
Employer contributions	2.9	0.5
Gross benefits paid	(4.4 )	(7.8 )
Settlements	–	(0.2 )
Fair value of plan assets at end of year	\$65.0	60.6

(Dollars in millions)

	2017	2016
Funded Status		
Funded status at end of year	\$(30.3)	(40.0)
Accrued benefit cost	(30.3)	(40.0)

Amounts recognized in the Balance Sheet consist of:

Current liability	(0.2 )	(0.2 )
Noncurrent liability	(30.1)	(39.8)
Accumulated other comprehensive (income)/loss (before tax effect)	47.4	56.0

Amounts recognized in accumulated other comprehensive (income)/loss consist of:

Net actuarial loss	47.4	56.0
Accumulated other comprehensive (income)/loss (before tax effect)	\$47.4	56.0

The estimated amount that will be amortized from accumulated other comprehensive (income) loss into net periodic benefit cost (income) in 2018 is \$2.3 million.

The following table provides the components of net periodic benefit cost for the plans for 2017, 2016 and 2015:

(Dollars in millions)	2017	2016	2015
Service cost	\$—	—	—
Interest cost	3.2	3.9	3.8
Expected return on plan assets	(3.9)	(4.4)	(4.5)
Net actuarial loss	2.6	2.0	1.8
Net periodic benefit cost	1.9	1.5	1.1
Defined contribution plans	6.3	5.2	5.0
Total	\$8.2	6.7	6.1

The discount rate used in measuring the Company's pension obligations was developed by matching yields of actual high-quality corporate bonds to expected future pension plan cash flows (benefit payments). Over 400 Aa-rated, non-callable bonds with a wide range of maturities were used in the analysis. After using the bond yields to determine the present value of the plan cash flows, a single representative rate that resulted in the same present value was developed. The expected long-term rate of return on plan assets assumption was determined by reviewing the actual investment return of the plans since inception and evaluating those returns in relation to expectations of various investment organizations to determine whether long-term future returns are expected to differ significantly from the past.

The following weighted-average assumptions were used to determine the net periodic benefit cost for the pension plans:

	2017	2016	2015		
Discount rate	3.25 %	4.25 %	4.25 %		
Rate of increase in compensation levels	N/A	N/A	N/A		
Expected long-term rate of return on assets	3.25 %	6.75 %	6.75 %		

The following weighted-average assumptions were used to determine the net periodic benefit obligations for the pension plans:

	2017	2016
Discount rate	3.65 %	3.25 %
Rate of increase in compensation levels	N/A	N/A

The assumed rate of increase in compensation levels is not applicable in 2017, 2016 and 2015 as the plan was frozen in earlier years.

The asset allocation for the Company's pension plans at the end of 2017 and 2016, and the Company's acceptable range and the target allocation for 2018, by asset category, are as follows:

Asset Category	Target Allocation	Acceptable Range	Percentage of Plan Assets at Year-end			
	2018		2017	2016		
Return seeking	60	% 55-65%	62 %	59 %		
Liability hedging	40	% 35-45%	35 %	38 %		
Cash/cash equivalents	–	0-5%	3 %	3 %		

The Company's pension plan assets are managed by outside investment managers and assets are rebalanced when the target ranges are exceeded. Pension plan assets consist principally of funds which invest in marketable securities including common stocks, bonds, and interest-bearing deposits. The Company's investment strategy with respect to pension assets is to achieve a total rate of return (income and capital appreciation) that is sufficient to accomplish the purpose of providing retirement benefits to all eligible and future retirees of the pension plan. The Company regularly monitors performance and compliance with investment guidelines.

**Fair Value of Financial Measurements**

The fair values of the Company's defined benefit plan investments as of September 30, 2017 and 2016, by asset category, were as follows:

(Dollars in millions)	2017	2016
Investments at fair value:		
Cash and cash equivalents	\$1.9	1.6
Common and preferred stock funds:		
Domestic large capitalization	10.6	8.9
Domestic small-/mid-capitalization	3.3	2.7
International funds	14.3	12.3
Fixed income funds	30.7	30.6
Real estate investment funds	4.2	4.5
Total investments at fair value	\$65.0	60.6

The following methods were used to estimate the fair value of each class of financial instrument:

**Cash and cash equivalents:** The carrying value of cash represents fair value as it consists of actual currency.

**Investment Funds:** The fair value of the investment funds, which offer daily redemptions, is determined based on the published net asset value of the funds as a practical expedient for fair value.

**Expected Cash Flows**

Information about the expected cash flows for the pension and other postretirement benefit plans follows:

(Dollars in millions)	Pension Benefits	Other Benefits
Expected Employer Contributions — 2018	\$ 3.0	0.1
Expected Benefit Payments:		
2018	4.9	0.1
2019	5.1	0.1
2020	5.7	0.1
2021	5.4	0.1
2022	5.6	0.1
2023-2027	\$ 29.5	0.3

**12. Derivative Financial Instruments**

Market risks relating to the Company's operations result primarily from changes in interest rates and changes in foreign currency exchange rates. The Company is exposed to market risk related to changes in interest rates and selectively uses derivative financial instruments, including forward contracts and swaps, to manage these risks. During 2016, the Company entered into several forward contracts to purchase pounds sterling (GBP) to hedge two deferred payments due in connection with the acquisition of Plastique. In addition, the Company's Canadian subsidiary Morgan Schaffer enters into foreign exchange contracts to manage foreign currency risk as a portion of their revenue is denominated in U.S. dollars. The Company expects hedging gains or losses to be essentially offset by losses or gains on the related underlying exposures. The amounts ultimately recognized may differ for open positions, which remain subject to ongoing market price fluctuations until settlement. For derivative instruments designated as cash flow hedges, the gain or loss on the derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item. The fair value of the foreign currency derivative is classified in accrued expenses on the Company's Consolidated Balance Sheets. The forward contracts listed below will be recognized within the next twelve months except for 700 GBP which will be recognized in 2019. The following is a summary of the notional transaction amounts and fair values for the Company's outstanding derivative financial instruments as of September 30, 2017.

(In thousands)	Notional Amount (Currency)	Fair Value (US\$)
Forward contracts	1,859 GBP	(173 )
Forward contracts	3,250 USD	149
Forward contracts	200 EUR	(5 )

Fair value of financial instruments

The Company's forward contracts are classified within Level 2 of the valuation hierarchy in accordance with FASB Accounting Standards Codification (ASC) 825, as presented below as of September 30, 2017:

(In thousands)	Level 1	Level 2	Level 3	Total
Liabilities:				
Forward contracts	\$ -	(29 )	-	(29 )

Valuation was based on third party evidence of similarly priced derivative instruments. There are no master netting arrangements with financial parties.

### 13. Business Segment Information

The Company is organized based on the products and services it offers, and classifies its business operations in segments for financial reporting purposes. Currently, the Company has four reporting segments: Filtration/Fluid Flow (Filtration), RF Shielding and Test (Test), Utility Solutions Group (USG) and Technical Packaging.

The Filtration segment's operations consist of: PTI Technologies Inc. (PTI), VACCO Industries (VACCO), Crissair, Inc. (Crissair), Mayday Manufacturing Co. (Mayday), Hi-Tech Metals, Inc. (Hi-Tech) and Westland Technologies, Inc. (Westland). PTI, VACCO and Crissair design and manufacture specialty filtration products including hydraulic filter elements and fluid control devices used in commercial aerospace applications, unique filter mechanisms used in micro-propulsion devices for satellites and custom designed filters for manned aircraft and submarines. Mayday designs and manufactures mission-critical bushings, pins, sleeves and precision-tolerance machined components for landing gear, rotor heads, engine mounts, flight controls, and actuation systems for the aerospace and defense industries. Hi-Tech is a full-service metal processor offering aerospace OEM's and Tier 1 suppliers, a large portfolio of processing services including anodizing, cadmium and zinc-nickel plating, organic coatings, non-destructive testing, and heat treatment. Westland designs, develops and manufactures elastomeric-based signature reduction solutions for U.S. naval vessels.

The Test segment's operations consist of ETS-Lindgren Inc. and related subsidiaries (ETS-Lindgren). ETS-Lindgren is an industry leader in providing its customers with the ability to identify, measure and contain magnetic, electromagnetic and acoustic energy. ETS-Lindgren also manufactures radio frequency shielding products and components used by manufacturers of medical equipment, communications systems, electronic products, and shielded rooms for high-security data processing and secure communication.

The USG segment's operations consist of Doble Engineering Company and related subsidiaries (Doble), Morgan Schaffer Ltd. (Morgan Schaffer), and NRG Systems, Inc. (NRG). Doble provides high-end, intelligent diagnostic test solutions for the electric power delivery industry and is a leading supplier of power factor and partial discharge testing instruments used to assess the integrity of high-voltage power delivery equipment. Morgan Schaffer provides an integrated offering of dissolved gas analysis, oil testing, and data management solutions which enhance the ability of electric utilities to accurately monitor the health of critical power transformers. NRG designs and manufactures decision support tools for the renewable energy industry, primarily wind.

The Technical Packaging segment's operations consist of Thermoform Engineered Quality LLC (TEQ) and Plastique. The companies within this segment provide innovative solutions to the medical and commercial markets for thermoformed and precision molded pulp fiber packages and specialty products using a wide variety of thin gauge plastics and pulp.



Accounting policies of the segments are the same as those described in the summary of significant accounting policies in Note 1 to the Consolidated Financial Statements. The operating units within each reporting segment have been aggregated because of similar economic characteristics and meet the other aggregation criteria of FASB ASC 280.

The Company evaluates the performance of its operating units based on EBIT, which is defined as earnings before interest and taxes. EBIT on a consolidated basis is a non-GAAP financial measure; see “Non-GAAP Financial Measures” in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” Intersegment sales and transfers are not significant. Segment assets consist primarily of customer receivables, inventories, capitalized software and fixed assets directly associated with the production processes of the segment. Segment depreciation and amortization is based upon the direct assets listed above.

### Net Sales

(Dollars in millions)

Year ended September 30,	2017	2016	2015
Filtration	\$279.5	207.8	196.7
Test	160.9	161.5	177.6
USG	162.4	127.8	123.6
Technical Packaging	82.9	74.4	39.4
Consolidated totals	\$685.7	571.5	537.3

No customer exceeded 10% of sales in 2017 or 2016.

**EBIT**

(Dollars in millions)

Year ended September 30,	2017	2016	2015
Filtration	\$52.2	45.2	41.7
Test	19.5	13.9	9.5
USG	36.6	31.1	29.6
Technical Packaging	8.5	9.6	4.9
Reconciliation to consolidated totals (Corporate)	(32.1)	(30.1)	(23.4)
Consolidated EBIT	84.7	69.7	62.3
Less: interest expense	(4.6 )	(1.3 )	(0.8 )
Earnings before income tax	\$80.1	68.4	61.5

**Identifiable Assets**

(Dollars in millions)

Year ended September 30,	2017	2016
Filtration	\$194.2	143.5
Test	132.2	110.9
USG	175.5	85.4
Technical Packaging	47.1	40.9
Corporate – Goodwill	377.9	323.6
Corporate – Other assets	333.5	274.1
Consolidated totals	\$1,260.4	978.4

Corporate assets consist primarily of goodwill, deferred taxes, acquired intangible assets and cash balances.

**Capital Expenditures**

(Dollars in millions)

Year ended September 30,	2017	2016	2015
Filtration	\$10.2	3.3	5.0
Test	4.5	3.3	3.1
USG	7.6	3.3	3.3
Technical Packaging	7.4	3.9	1.0
Corporate	–	–	–
Consolidated totals	\$29.7	13.8	12.4

In addition to the above amounts, the Company incurred expenditures for capitalized software of \$9.0 million, \$8.7 million and \$6.9 million in 2017, 2016 and 2015, respectively.

**Depreciation and Amortization**

(Dollars in millions)

Year ended September 30,	2017	2016	2015
Filtration	\$6.6	4.0	3.8
Test	3.6	3.6	3.1
USG	9.8	8.1	6.2
Technical Packaging	3.5	2.9	1.4
Corporate	8.7	5.0	4.1
Consolidated totals	\$32.2	23.6	18.6

Depreciation expense of property, plant and equipment was \$15.9 million, \$11.9 million and \$9.7 million for 2017, 2016 and 2015, respectively.

**Geographic Information****Net Sales**

(Dollars in millions)

Year ended September 30,	2017	2016	2015
United States	\$503.1	403.6	385.5
Asia	69.8	68.1	70.4
Europe	75.4	71.6	46.6
Canada	22.2	12.9	11.6
India	4.8	2.9	4.3
Other	10.4	12.4	18.9
Consolidated totals	\$685.7	571.5	537.3

**Long-Lived Assets**

(Dollars in millions)

Year ended September 30,	2017	2016
United States	\$111.5	79.9
Europe	16.8	11.7
Other	4.4	0.8
Consolidated totals	\$132.7	92.4

Net sales are attributed to countries based on location of customer. Long-lived assets are attributed to countries based on location of the asset.

**14. Commitments and Contingencies**

The Company leases certain real property, equipment and machinery under non-cancelable operating leases. Rental expense under these operating leases was \$6.8 million, \$6.0 million and \$5.2 million for 2017, 2016 and 2015, respectively. Future aggregate minimum lease payments under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of September 30, 2017, are:

(Dollars in thousands)

## Years ending September 30:

2018	6,361
2019	5,340
2020	3,733
2021	2,653
2022 and thereafter	3,647
Total	\$21,734

At September 30, 2017, the Company had \$9.7 million in letters of credit outstanding as guarantees of contract performance. As a normal incident of the businesses in which the Company is engaged, various claims, charges and litigation are asserted or commenced from time to time against the Company. Additionally, the Company is currently involved in various stages of investigation and remediation relating to environmental matters. It is the opinion of Management that the aggregate costs involved in the resolution of these matters, and final judgments, if any, which might be rendered against the Company are adequately accrued, are covered by insurance or are not likely to have a material adverse effect on the Company's results from continuing operations, capital expenditures or competitive position.

**15. Capital Leases**

The Company leases certain real property, equipment and machinery under capital leases, primarily associated with the 2017 acquisitions of NRG and Mayday. The facility leases expire in 2029 and the machinery leases expire in 2020. As of September 30, 2017, the net carrying value and accumulated depreciation of the assets under capital leases recorded by the Company were \$16.1 million and \$0.8 million, respectively. Capital lease obligations are included within other long-term liabilities (long-term portion) and accrued other expenses (current portion). Remaining payments due on the Company's capital lease obligations as of September 30, 2017, are:

(Dollars in thousands)

Years ending September 30:

2018	\$1,883
2019	1,922
2020	1,914
2021	1,858
2022 and thereafter	15,977
Total minimum lease payments	23,554
Less: amounts representing interest	4,233
Present value of net minimum lease payments	19,321
Current portion of capital lease obligations	1,370
Non-current portion of capital lease obligations	\$17,951

**16. Quarterly Financial Information (Unaudited)**

(Dollars in thousands, except per share amounts)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Fiscal Year
2017					
Net sales	\$146,368	161,178	171,189	207,005	685,740
Net earnings	10,727	11,157	12,645	19,174	53,703
Basic earnings (loss) per share:					
Net earnings	0.42	0.43	0.49	0.74	2.08
Diluted earnings (loss) per share:					
Net earnings	0.41	0.43	0.49	0.74	2.07
Dividends declared per common share	\$0.08	0.08	0.08	0.08	0.32

2016

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Net sales	\$132,833	138,930	140,191	159,505	571,459
Net earnings	8,829	8,610	11,528	16,915	45,882
Basic earnings (loss) per share:					
Net earnings	0.34	0.33	0.45	0.66	1.78
Diluted earnings (loss) per share:					
Net earnings	0.34	0.33	0.44	0.65	1.77
Dividends declared per common share	\$0.08	0.08	0.08	0.08	0.32

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## MANAGEMENT'S STATEMENT OF FINANCIAL RESPONSIBILITY

The Company's Management is responsible for the fair presentation of the Company's financial statements in accordance with accounting principles generally accepted in the United States of America, and for their integrity and accuracy. Management is confident that its financial and business processes provide accurate information on a timely basis.

Management, with the oversight of ESCO's Board of Directors, has established and maintains a strong ethical climate in which the Company's affairs are conducted. Management also has established an effective system of internal controls that provide reasonable assurance as to the integrity and accuracy of the financial statements, and responsibility for the Company's assets. KPMG LLP, the Company's independent registered public accounting firm, reports directly to the Audit and Finance Committee of the Board of Directors. The Audit and Finance Committee has established policies consistent with corporate reform laws for auditor independence. In accordance with corporate governance listing requirements of the New York Stock Exchange:

- A majority of Board members are independent of the Company and its Management.

All members of the key Board committees — the Audit and Finance, the Human Resources and Compensation and the Nominating and Corporate Governance Committees — are independent.

- The independent members of the Board meet regularly without the presence of Management.

The Company has a clear code of ethics and a conflict of interest policy to ensure that key corporate decisions are made by individuals who do not have a financial interest in the outcome, separate from their interest as Company officials.

- The charters of the Board committees clearly establish their respective roles and responsibilities.

The Company has a Corporate Ethics Committee, ethics officers at each operating location and an ombudsman hot line available to all domestic employees and all foreign employees have local ethics officers and access to the Company's ombudsman.



The Company has a strong financial team, from its executive leadership to each of its individual contributors. Management monitors compliance with its financial policies and practices over critical areas including internal controls, financial accounting and reporting, accountability, and safeguarding of its corporate assets. The internal audit function maintains oversight over the key areas of the business and financial processes and controls, and reports directly to the Audit and Finance Committee. Additionally, all employees are required to adhere to the ESCO Code of Business Conduct and Ethics, which is monitored by the Corporate Ethics Committee.

Management is dedicated to ensuring that the standards of financial accounting and reporting that are established are maintained. The Company's culture demands integrity and a commitment to strong internal practices and policies.

The Consolidated Financial Statements have been audited by KPMG LLP, whose report is included herein.

November 29, 2017

/s/Victor L. Richey

/s/Gary E. Muenster

Victor L. Richey Chairman, Chief Executive Officer and President	Gary E. Muenster Executive Vice President and Chief Financial Officer
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## 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 in Rule 13a-15(f) under the Securities Exchange Act of 1934). Our internal control over financial reporting is 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 in the United States of America.

Because of its inherent limitations, any system of internal control over financial reporting, no matter how well designed, may not prevent or detect misstatements due to the possibility that a control can be circumvented or overridden or that misstatements due to error or fraud may occur that are not detected. Also, because of changes in conditions, internal control effectiveness may vary over time.

Management assessed the effectiveness of the Company's internal control over financial reporting as of September 30, 2017, using criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and concluded that the Company maintained effective internal control over financial reporting as of September 30, 2017, based on these criteria.

Our internal control over financial reporting as of September 30, 2017, has been audited by KPMG LLP, an independent registered public accounting firm, as stated in its report which is included herein.

We acquired NRG Systems, Inc. (NRG) on May 8, 2017, and the assets of Morgan Schaffer Inc. (Morgan Schaffer) on May 25, 2017 and Vanguard Instruments Company (Vanguard Instruments) on August 30, 2017. NRG, Morgan Schaffer and Vanguard Instruments had total assets representing 11.6 percent of consolidated assets, and total sales representing 3.6 percent of consolidated net sales, as of and for the year ended September 30, 2017. We excluded from our assessment of the effectiveness of our internal control over financial reporting as of September 30, 2017 internal control over financial reporting associated with NRG, Morgan Schaffer and Vanguard Instruments.

November 29, 2017

/s/ Victor L. Richey

/s/ Gary E. Muenster

Victor L. Richey	Gary E. Muenster
Chairman, Chief Executive Officer	Executive Vice President
and President	and Chief Financial Officer

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders  
ESCO Technologies Inc.:

We have audited ESCO Technologies Inc.'s (the Company) internal control over financial reporting as of September 30, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). ESCO Technologies Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

In our opinion, ESCO Technologies Inc. maintained, in all material respects, effective internal control over financial reporting as of September 30, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The Company acquired NRG Systems, Inc. (NRG) and the assets of Morgan Schaffer Inc. (Morgan Schaffer) and Vanguard Instruments Company (Vanguard Instruments) during the year ended September 30, 2017, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of September 30, 2017, NRG's, Morgan Schaffer's, and Vanguard Instruments' internal control over financial reporting associated with total assets representing 11.6 percent of consolidated assets, and total sales representing 3.6 percent of consolidated net sales, included in the consolidated financial statements of ESCO Technologies Inc. and subsidiaries as of and for the year ended September 30, 2017. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of NRG, Morgan Schaffer and Vanguard Instruments.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of ESCO Technologies Inc. and subsidiaries as of September 30, 2017 and 2016, and the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended September 30, 2017, and our report dated November 29, 2017 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

St. Louis, Missouri  
November 29, 2017

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**EXHIBITS**

The following exhibits are submitted with and attached to this Form 10-K; exhibit numbers correspond to the exhibit table in Item 601 of Regulation S-K. For a complete list of exhibits including those incorporated by reference, see Item 15(a)(3) of this Form 10-K, above.

<b>Exhibit No.</b>	<b>Exhibit</b>
<u>21</u>	<u>Subsidiaries of the Company</u>
<u>23</u>	<u>Consent of Independent Registered Public Accounting Firm</u>
<u>31.1</u>	<u>Certification of Chief Executive Officer</u>
<u>31.2</u>	<u>Certification of Chief Financial Officer</u>
<u>32</u>	<u>* Certification of Chief Executive Officer and Chief Financial Officer</u>
101.INS	**XBRL Instance Document
101.SCH	**XBRL Schema Document
101.CAL	**XBRL Calculation Linkbase Document
101.LAB	**XBRL Label Linkbase Document
101.PRE	**XBRL Presentation Linkbase Document
101.DEF	**XBRL Definition Linkbase Document

\*Furnished (and not filed) herewith pursuant to Item 601(b)(32)(ii) of Regulation S-K.

\*\* Exhibit 101 to this report consists of documents formatted in XBRL (Extensible Business Reporting Language); a printed copy is not included.

