PARKER HANNIFIN ANNUAL REPORT

2018



FISCAL YEAR 2018

RECORDS

TOTAL NET SALES
Billion

15.7%

TOTAL SEGMENT
OPERATING MARGIN

\$7.83

EARNINGS PER SHARE

\$1.6

CASH FLOW FROM OPERATIONS

LETTER TO SHAREHOLDERS



Thomas L. Williams, Chairman and Chief Executive Officer (L) Lee C. Banks, President and Chief Operating Officer (R)

Fiscal year 2018 was the strongest year of financial performance in the company's history and delivered significant returns for our shareholders. The ongoing implementation of the new Win Strategy™ continues to put Parker on a clear path to achieving even greater improvements across our operations. Given our progress, we have established new five-year targets that reflect our confidence in Parker's future.

While the strategy sets our direction, our success is only achieved by Parker's highly engaged team members, who continue to demonstrate incredible responsiveness and adaptability to the changes we are making together. Their commitment to owning and improving their portion of the business reflects the entrepreneurial spirit that has defined the Parker culture for more than a century.

FISCAL YEAR 2018

RECORD FINANCIAL PERFORMANCE

In fiscal year 2018, the impact of the Win Strategy and broad-based market growth positioned Parker to achieve a number of records for financial performance:

- Total net sales were a record at \$14.3 billion, a 19% increase from the previous year. Organic growth of 8% far outpaced the growth rate of global industrial production.
- Total segment operating margin reached a record 15.7%, or 16.2% adjusted, representing a 40 basis point (bps) improvement compared with adjusted segment operating margin of 15.8% the prior year.
- Net income increased 8% to \$1.1 billion, or a record \$7.83 per share. Adjusted earnings per share were \$10.42, an increase of 28% compared to the prior year.
- Cash flow from operations for fiscal year 2018 was another record for Parker at \$1.6 billion or 11.2% of sales and free cash flow conversion was 127%. This is the 17th consecutive fiscal year that Parker has generated cash flow from operations (before discretionary pension contributions) greater than 10% of sales.

 We used cash to extend our record of increasing annual dividends paid to 62 consecutive fiscal years, we reduced debt by \$945 million and we repurchased \$300 million in Parker shares in fiscal year 2018.
 We will continue to generate and deploy cash efficiently to create long-term value for shareholders.

Fiscal year 2018 was one to celebrate and reflect upon. We now have an opportunity to carry forward the significant momentum of a record year and build on it in fiscal year 2019. We anticipate continued, healthy organic sales growth, and with ongoing improvement across our operations we are forecasting another record year for sales, segment operating margins, net income and earnings per share.

WIN STRATEGY PRODUCING TRANSFORMATIVE RESULTS

We are still early in the process of implementing the new Win Strategy and there is much room to make continued improvements. The strategies and measures we adopted have proven an effective guide to delivering improved business performance.

ENGAGED PEOPLE

Parker's highest priority is safety, and eliminating all work-related accidents is something we strive for each day. Our Recordable Incident Rate has dropped by 54% since 2014, including a 21% reduction this year. Team members are working together in High Performance Teams to deliver these improvements and create a safety-first environment.

High Performance Teams are an effective tool for us to enable an ownership culture at Parker and drive better performance. Today more than 80% of our people participate in these teams, with more than 5,000 established worldwide. We are in the process of extending these teams to focus on improvements in other important areas of our business such as quality, cost and on-time delivery.

80%
WORKFORCE
ON HIGH
PERFORMANCE

54% REDUCTION IN

We also realize that Parker's operations can have a positive and widespread impact on the world, and recognize the importance of acting responsibly with the planet's natural resources. Over the past decade Parker has reduced energy use by 54%, today we recycle 85% of the waste generated from our manufacturing processes, and our Carbon Disclosure Project (CDP) ranking is among the top quartile of our peer companies.

85%
WASTE RECYCLED

PREMIER CUSTOMER EXPERIENCE

Parker's success is rooted in our ability to provide a premier experience for our customers. Through transactional surveys and relationship interviews, we are actively measuring Likelihood-to-Recommend, a reliable indicator of our customers' experience when doing business with Parker. These surveys have indicated opportunities for improvement. As a result we launched the I Am Parker initiative, designed to engage all team members in addressing three areas of opportunity: owning and resolving

our customers' challenges, doing so with speed and accuracy and communicating clearly and consistently.

We are seeing positive results of eBusiness initiatives that improve customers' online experience through faster response times, increased support tools, improved navigation and ongoing user research and feedback. Digital platforms play a prominent role in driving customer experience in today's increasingly connected world, and we're making it easier than ever to leverage the unmatched breadth of products, systems and knowledge Parker offers.

PROFITABLE GROWTH

Understanding the unmet needs of our customers and addressing them by improving our products and technologies is the foundation of Parker's organic growth strategy. To better leverage our investment in innovation, we are enhancing our technology development by establishing Parker Technology Centers. These centers will focus on technologies and processes such as additive manufacturing, robotics, the Internet of Things (IoT), filtration, motion technologies and advanced material science development. This engineering cost-neutral strategy offers the best of both worlds: traditional division product and application engineering expertise supplemented with advanced design and manufacturing processes, ultimately improving outcomes for our customers.

Parker's ability to address the aftermarket through our global distribution network is among our most important growth strategies. It's a channel more than 50 years in the making, and one that competitors have been unable to duplicate. We've added 362 distributors since fiscal year 2015 with an emphasis on international growth, so Parker can be there to support our customers directly, even on the most remote job sites around the world. This also provides us a more stable revenue source that typically carries higher operating margins.

FINANCIAL PERFORMANCE

Within our Win Strategy goal for Financial Performance we have four key strategic initiatives: Simplification, Lean Enterprise, Strategic Supply Chain and Value Pricing. Our business leaders utilize standard work designed for each of these initiatives in order to increase speed, reduce cost and improve the overall experience for our customers.

ENGINEERING YOUR SUCCESS

The Win Strategy, along with our capital allocation and portfolio strategies, shape our approach to engineering the success of our key stakeholders and will together enable us to achieve top quartile financial performance.

Parker's capital allocation priorities are to continue our record 62 consecutive fiscal years of increased annual dividends, capital expenditures to drive both organic growth and productivity improvements across our operations, our 10b5-1 share repurchase program, strategic acquisitions and discretionary share repurchase. Our goal is to deploy capital in the most effective way to drive long-term shareholder value.

Parker's acquisition strategy is to continue as the consolidator of choice in our industry, by identifying companies which generate strategic value for our key stakeholders. The CLARCOR acquisition is an excellent example of this approach. It was transformational for our portfolio and has proven to be a strong cultural fit. As a result, we have increased our synergy targets for fiscal year 2020 from \$140 million to \$160 million in cost synergies, and established a target of \$100 million in incremental revenue synergies over that period.

The strength and interconnectivity of our portfolio continues to be a competitive differentiator. No other company can match Parker's technology expertise or breadth of product in the motion and control industry, a \$130 billion global market in which there is significant opportunity for Parker to grow. We will continue to focus on highly engineered products and systems with protected intellectual property, long product lifecycles and a balance between OEM and aftermarket solutions across our portfolio.

\$160 Million COST SYNERGIES



NEW FIVE-YEAR FINANCIAL PERFORMANCE TARGETS

While Parker has made meaningful advancements over the past several years, our team members are committed to continuous improvement and we intend to build upon our strong financial position and distinct competitive advantages. As a result,

we have established new five-year financial performance targets through fiscal year 2023:

- Organic sales growth at 150 basis points greater than the Global Industrial Production Index. This target is best-in-class, and we are committed to demonstrating this over a cycle.
- Profitability as measured by segment operating margins of 19% and EBITDA margins of 20%, both of which will position us well within the top quartile among our diversified industrial peer group.
- Free cash flow conversion of greater than 100%. This has long been a key indicator of our ability to generate cash, and we've now achieved 17 consecutive years of converting better than 100% of net income.
- A greater than 10% compound annual growth rate in adjusted earnings per share.

Continued progress toward achieving our new five-year financial targets will maintain Parker's position among the best performing diversified industrial companies and generate significant long-term value for our shareholders.

FISCAL YEAR 2023 TARGETS

Basis

ORGANIC GROWTH GREATER THAN THE GLOBAL INDUSTRIAL PRODUCTION INDEX

19%

SEGMENT OPERATING MARGINS

20%
ERITDA MARGINS

>100%

FREE CASH FLOW CONVERSION

>10%

COMPOUND ANNUAL GROWTH RATE IN ADJUSTED EARNINGS PER SHARE

LEADERSHIP WITH A PURPOSE

Given the scale of our operations and the breadth of our capabilities, Parker is in a unique position to make a positive and meaningful impact in communities around the world. We are fortunate to be able to lead Parker into the future with a purpose that involves partnering with our customers to develop innovative solutions that help improve the quality of life for people around the world and create a positive impact on our team members and in local communities.

We would like to thank our remarkable team members, as Parker's success is a direct result of their engagement and dedication, and our shareholders for their confidence. We hope you share our excitement for Parker's future.

Sincerely,

Thomas L. Williams

Chairman and Chief Executive Officer

Lee C. Banks

President and Chief Operating Officer

August 2018

Looking ahead, Parker team members will carry forward the momentum of a record year to generate significant long-term value for shareholders and achieve top quartile financial performance.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10-K

×	ANNUAL REPORT PURSU EXCHANGE ACT OF 1934		N 13 OR 15(d) OF THE SECURITIES
	For the fiscal year ended June 30, 201	8	
		OR	
	TRANSITION REPORT PU EXCHANGE ACT OF 1934		TION 13 OR 15(d) OF THE SECURITIES
	For the transition period from	to	
		Commission File No	p. 1-4982
		ANNIFIN xact name of registrant as spe	CORPORATION cified in its charter)
	Ohio		34-0451060
	(State or other jurisdiction o Incorporation or Organization		(I.R.S. Employer Identification No.)
	6035 Parkland Boulevard, Clevela	nd, Ohio	44124-4141
	(Address of Principal Executive O	ffices)	(Zip Code)
	Registrant's	telephone number, includi	ng area code (216) 896-3000
	Securiti	ies registered pursuant to S	Section 12(b) of the Act:
	Title of Each Class		Name of Each Exchange on which Registered
	Common Shares, \$.50 par val	ue	New York Stock Exchange
	Securities	registered pursuant to Sec	tion 12(g) of the Act: None
	Indicate by check mark if the Registrant is	a well-known seasoned issu	ner, as defined in Rule 405 of the Securities Act.
	Yes ເ⊗ No □		
Act.		not required to file reports	oursuant to Section 13 or Section 15(d) of the
		nonths (or for such shorter pe	required to be filed by Section 13 or 15(d) of the Securities eriod that the Registrant was required to file such reports), and No \square
	active Data File required to be submitted and	d posted pursuant to Rule 40	cally and posted on its corporate website, if any, every 5 of Regulation S-T (§232.405 of this chapter) during the red to submit and post such files). Yes 🗷 No 🗆

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

by reference in Part III of this Form 10-K or any amendment to this Form 10-K \square .

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated

Large Accelerated Filer:		×	Accelerated Filer:	
Non-Accelerated Filer:			Smaller Reporting Company:	
(Do not check if a smaller	reporting company)			
Emerging Growth Compan	ny			
complying with any new or Indicate by check ma	revised financial accounting whether the Registrant	ing standards pro	registrant has elected not to use the extended transition ovided pursuant to Section 13(a) of the Exchange Act. ny (as defined in Rule 12b-2 of the Exchange Act).	es No 🗷
The aggregate marke \$26,411,763,329.	t value of the outstanding	common stock h	neld by non-affiliates of the Registrant as of December	31, 2017:
Th		T 1 21 2010	122 260 024	

The number of Common Shares outstanding on July 31, 2018 was 132,360,024.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for the Company's 2018 Annual Meeting of Shareholders to be held on October 24, 2018, are incorporated by reference into Part III of this Annual Report on Form 10-K.

TABLE OF CONTENTS

PART I		
Item 1.	Business	2
Item 1A.	Risk Factors	9
Item 1B.	Unresolved Staff Comments	13
Item 1C.	Executive Officers of the Registrant	14
Item 2.	Properties	15
Item 3.	Legal Proceedings	15
Item 4.	Mine Safety Disclosures	15
PART II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	16
Item 6.	Selected Financial Data	16
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	17
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	28
Item 8.	Financial Statements and Supplementary Data	29
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	65
Item 9A.	Controls and Procedures	65
Item 9B.	Other Information	65
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	65
Item 11.	Executive Compensation	65
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	66
Item 13.	Certain Relationships and Related Transactions, and Director Independence	66
Item 14.	Principal Accountant Fees and Services	66
PART IV		
Item 15.	Exhibits and Financial Statement Schedules	67
Signatures		72

PARKER-HANNIFIN CORPORATION

FORM 10-K

Fiscal Year Ended June 30, 2018

PART I

ITEM 1. Business. Parker-Hannifin Corporation is a leading worldwide diversified manufacturer of motion and control technologies and systems, providing precision engineered solutions for a wide variety of mobile, industrial and aerospace markets. The Company was incorporated in Ohio in 1938. Its principal executive offices are located at 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141, telephone (216) 896-3000. As used in this Annual Report on Form 10-K, unless the context otherwise requires, the term "Company" refers to Parker-Hannifin Corporation and its subsidiaries and the term "year" and references to specific years refer to the applicable fiscal year.

The Company's investor relations internet website address is www.phstock.com. The Company makes available free of charge on or through its website its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after filing or furnishing such material electronically with the Securities and Exchange Commission. The information contained on or accessible through the Company's website is not part of this Annual Report on Form 10-K.

The Board of Directors has adopted a written charter for each of the committees of the Board of Directors. These charters, as well as the Company's Global Code of Business Conduct, Corporate Governance Guidelines and Independence Standards for Directors, are posted and available on the Company's investor relations internet website at www.phstock.com under the Corporate Governance page. Shareholders may request copies of these corporate governance documents, free of charge, by writing to Parker-Hannifin Corporation, 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141, Attention: Secretary, or by calling (216) 896-3000.

The Company's manufacturing, service, sales, distribution and administrative facilities are located in 39 states within the United States and in 49 other countries. The Company's products are sold as original and replacement equipment through sales and distribution centers worldwide. The Company markets its products through direct-sales employees, independent distributors and sales representatives. The Company's products are supplied to approximately 455,000 customers in virtually every significant manufacturing, transportation and processing industry.

The Company has two reporting segments: Diversified Industrial and Aerospace Systems. During 2018, the Company's technologies and systems were used in the products of these two reporting segments. For 2018, the Company's net sales were \$14.3 billion. Diversified Industrial Segment products accounted for 84% and Aerospace Systems Segment products accounted for 16% of those net sales.

Markets

The Company's technologies and systems are used throughout various industries and in various applications. The approximately 455,000 customers who purchase the Company's products are found throughout nearly every significant manufacturing, transportation and processing industry. No single customer accounted for more than 3% of the Company's total net sales for the year ended June 30, 2018.

<u>Diversified Industrial Segment.</u> Sales of Diversified Industrial Segment products are made to both original equipment manufacturers ("OEMs") and distributors who serve the replacement markets in manufacturing, packaging, processing, transportation, mobile construction, refrigeration and air conditioning, agricultural and military machinery and equipment industries. The major markets for products of the Diversified Industrial Segment are listed below by group:

Engineered Materials Group:

- Aerospace
- Chemical processing
- Consumer
- Fluid power
- · General industrial
- Information technology
- Life sciences

Filtration Group:

- Agriculture
- Aerospace & defense
- Construction
- Food & beverage
- Heating, ventilation & air conditioning (HVAC)
- Industrial machinery
- Life sciences

Fluid Connectors Group:

- · Aerial lift
- · Agriculture
- · Bulk chemical handling
- Construction
- Food & beverage
- Fuel & gas delivery
- Industrial machinery

Instrumentation Group:

- Air conditioning
- · Alternative fuels
- Analytical
- Chemical
- Diesel engine
- Food & beverage
- Industrial machinery

- Microelectronics
- Military
- · Oil & gas
- · Power generation
- Renewable energy
- Telecommunications
- Transportation
- Marine
- Mining
- · Oil & gas
- Power generation
- Renewable energy
- Transportation
- Water purification
- · Life sciences
- Marine
- Mining
- Mobile
- · Oil & gas
- · Renewable energy
- Transportation
- Life sciences
- Microelectronics
- · Oil & gas
- · Packaging
- Refining
- Refrigeration
- Transportation

Motion Systems Group:

Mobile:

- · Agriculture
- Construction
- Marine
- · Material handling
- Military
- Transportation
- Truck & bus
- Turf

Industrial:

- Distribution
- General machinery
- Machine tool
- Mining
- · Oil & gas
- Power generation
- Semiconductor

<u>Aerospace Systems Segment</u>. Sales of the Aerospace Systems Segment products are made primarily in the commercial and military aerospace markets to both OEMs and to end users for spares, maintenance, repair and overhaul. The major markets for products of the Aerospace Systems Segment are listed below:

- · Aftermarket services
- Commercial transports
- Engines
- General & business aviation
- · Helicopters

- Military aircraft
- Missiles
- Power generation
- Regional transports
- Unmanned aerial vehicles

Principal Products and Methods of Distribution

Although the Company offers hundreds of thousands of individual products, no single product contributed more than 1% to the Company's total net sales for the year ended June 30, 2018. Listed below are some of the Company's principal products.

<u>Diversified Industrial Segment</u>. The products produced by the Company's Diversified Industrial Segment consist of a broad range of motion-control and fluid systems and components, which are described below by group:

Engineered Materials Group: static and dynamic sealing devices, including:

- · Dynamic seals
- Elastomeric o-rings
- Electro-medical instrument design & assembly
- Electromagnetic interference shielding
- Extruded & precision-cut fabricated elastomeric seals
- High-temperature metal seals

- Homogeneous & inserted elastomeric shapes
- Medical device fabrication & assembly
- Metal & plastic retained composite seals
- Shielded optical windows
- Silicone tubing & extrusions
- Thermal management
- Vibration dampening

Filtration Group: filters, systems and diagnostics solutions to monitor and remove contaminants from fuel, air, oil, water and other liquids and gases, including:

- · Aerospace filters & systems
- Air pollution control & dust collection systems & filters
- Compressed air & gas treatment solutions
- Engine fuel, oil, air & closed crankcase ventilation filtration systems
- Filtration & purification systems
- Fluid condition monitoring systems
- Gas turbine air inlet filters
- Heating, ventilation & air conditioning (HVAC) filters

- Hydraulic & lubrication filters & systems
- Industrial & analytical gas generators
- Instrumentation filters
- Membrane, fiber, & sintered metal filters
- Natural gas filters
- Process liquid, air & gas filters
- Sterile air filters
- Water purification filters & systems

Fluid Connectors Group: connectors which control, transmit and contain fluid, including:

- · Check valves
- · Diagnostic equipment
- Hose couplings
- · Industrial hose
- Low pressure fittings & adapters

- Polytetrafluoroethylene (PTFE) hose & tubing
- Quick couplings
- Rubber & thermoplastic hose
- Tube fittings & adapters
- Tubing & plastic fittings

Instrumentation Group: high quality critical flow components for process instrumentation, healthcare and ultra-high-purity applications and components for use in refrigeration and air conditioning systems and in fluid control applications for processing, fuel dispensing, beverage dispensing and mobile emissions, including:

- Accumulators
- Analytical instruments & sample conditioning systems
- Compressed natural gas dispensers
- Cryogenic valves
- · Electronic valves
- Emissions
- · Filter driers
- Fluid system & control fittings, meters, valves, regulators, & manifold valves

- Fluoropolymer chemical delivery fittings, valves & pumps
- High pressure fittings, valves, pumps & systems
- High-purity gas delivery fittings, valves & regulators
- Miniature valves & pumps
- · Natural gas on-board fuel systems
- Pressure regulating valves
- Refrigeration & air conditioning electronic controls & monitoring
- Solenoid valves

Motion Systems Group: hydraulic, pneumatic, and electromechanical components and systems for builders and users of mobile and industrial machinery and equipment, including:

Hydraulic Actuation:

- Cylinders
- · Rotary actuators
- · Helical actuators
- Accumulators
- Electrohydraulic actuators
- Coolers

Hydraulic Pumps & Motors:

- Piston pumps & motors
- Vane pumps & motors
- Gerotor pumps & motors
- · Power take-off
- · Fan drives
- Electrohydraulic pump
- Drive controlled pump
- Screw pump
- Integrated hydrostatic transmissions

Hydraulic & Electro Hydraulic Systems

Hydraulic Valves:

- · Cartridge valves
- Industrial valves
- Mobile valves

Pneumatics:

- Pneumatic valves
- Air preparation (FRL) & dryers
- Pneumatic cylinders
- Grippers
- IO link controllers

Electronics:

- Electric actuators & positioners
- Electronic displays & human machine interfaces (HMI)
- Controllers & HMI
- Sensors
- IoT
- Electric motors & gearheads
- Drives (AC/DC Servo)
- Joysticks
- Clusters
- Software

Diversified Industrial Segment products include standard products, as well as custom products which are engineered and produced to OEMs' specifications for application to particular end products. Both standard and custom products are also used in the replacement of original products. Diversified Industrial Segment products are marketed primarily through field sales employees and approximately 16,900 independent distributor locations throughout the world.

<u>Aerospace Systems Segment</u>. The principal products of the Company's Aerospace Systems Segment are used on commercial and military airframe and engine programs and include:

- Control actuation systems & components
- Engine systems & components
- Fluid conveyance systems & components
- Fluid metering, delivery & atomization devices
- Fuel systems & components
- Fuel tank inerting systems

- Hydraulic systems & components
- Lubrication components
- Pneumatic control components
- Power conditioning & management systems
- · Thermal management
- · Wheels & brakes

Aerospace Systems Segment products are marketed by the Company's regional sales organizations and are sold directly to original equipment manufacturers and end users throughout the world.

Competition

The Company's business operates in highly competitive markets and industries. The Company offers its products over numerous, varied markets through its divisions operating in 50 countries and consequently has hundreds of competitors when viewed across its various markets and product offerings. The Company's competitors include U.S. and non-U.S. companies.

These competitors and the degree of competition vary widely by product lines, end markets, geographic scope and/or geographic locations. Although each of the Company's segments has numerous competitors, given the Company's market and product breadth, no single competitor competes with the Company with respect to all products manufactured and sold by the Company.

In the Diversified Industrial Segment, the Company competes on the basis of product quality and innovation, customer service, manufacturing and distribution capability, and price competitiveness. The Company believes that it is one of the market leaders in most of the major markets for its most significant Diversified Industrial Segment products. The Company has comprehensive motion and control packages for the broadest systems capabilities. While the Company's primary global competitors include Bosch Rexroth AG, Danaher Corporation, Danfoss A/S, Donaldson Company, Inc., Eaton Corporation plc, Emerson Climate Technologies, Inc., Emerson/ASCO, Festo AG & Co., Freudenberg-NOK, Gates Corporation, IMI/Norgren, SMC Corporation, Swagelok Company, and Trelleborg AB, none of these businesses compete with every group in the Company's Diversified Industrial Segment and every product line offered by this segment.

In the Aerospace Systems Segment, the Company has developed alliances with key customers based on the Company's advanced technological and engineering capabilities, superior performance in quality, delivery, and service, and price competitiveness, which has enabled the Company to obtain significant original equipment business on new aircraft programs for its systems and components and to thereby obtain the follow-on repair and replacement business for these programs. Further, the Aerospace Systems Segment is able to utilize low-cost manufacturing techniques and best cost region strategies to achieve a lower cost producer status. Although the Company believes that it is one of the market leaders in most of the major markets for its most significant Aerospace Systems Segment products, the Company's primary global competitors for the most significant Aerospace Systems Segment products include Eaton Corporation plc, Honeywell International, Inc., Moog Inc., Triumph Group, Inc., UTC Aerospace Systems, Woodward, Inc. and Zodiac Aerospace SA.

The Company believes that its platform utilizing nine core technologies, which consist of aerospace, electromechanical, filtration, fluid handling, hydraulics, pneumatics, process control, refrigeration, and sealing and shielding, is a positive factor in its ability to compete effectively with both large and small competitors. For both of its segments, the Company believes that the following factors also contribute to its ability to compete effectively:

- decentralized operating structure that allows each division to focus on its customers and respond quickly at the local level;
- systems solution capabilities that use the Company's core technologies from both of its segments;
- global presence; and
- a strong global distribution network.

Research and Product Development

The Company continually researches the feasibility of new products and services through its development laboratories and testing facilities in many of its worldwide manufacturing locations. Its research and product development staff includes chemists, physicists, and mechanical, chemical and electrical engineers.

Total research and development costs relating to the development of new products and services and the improvement of existing products and services amounted to \$327.9 million in 2018, \$336.7 million in 2017 and \$359.8 million in 2016. These amounts include costs incurred by the Company related to independent research and development initiatives as well as costs incurred in connection with research and development contracts. Costs incurred in connection with research and development contracts and included in the total research and development costs reported above for 2018, 2017 and 2016 were \$40.8 million, \$65.3 million and \$58.0 million, respectively.

Patents, Trademarks, Licenses

The Company owns a number of patents, trademarks and licenses related to its products and has exclusive and non-exclusive rights to use patents and trademarks owned by others. In addition, patent and trademark applications are pending, although there can be no assurance that further patents and trademarks will be issued. The Company is not dependent to any material extent on any single patent, trademark or license or group of patents, trademarks or licenses.

Backlog and Seasonal Nature of Business

Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar

value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale. The Company's backlog by business segment for the past two years is included in Part II, Item 7 of this Annual Report on Form 10-K and is incorporated herein by reference. The Company's backlog was \$4.1 billion at June 30, 2018 and \$3.8 billion at June 30, 2017. Approximately 89% of the Company's backlog at June 30, 2018 is scheduled for delivery in the succeeding twelve months. The Company's business is generally not seasonal in nature.

Environmental Regulation

Certain of the Company's operations necessitate the use and handling of hazardous materials and, as a result, the Company is subject to United States federal, state, and local laws and regulations as well as non-U.S. laws and regulations designed to protect the environment and regulate the discharge of materials into the environment. These laws impose penalties, fines and other sanctions for non-compliance and liability for response costs, property damage and personal injury resulting from past and current spills, disposals or other releases of, or exposures to, hazardous materials. Among other environmental laws, the Company is subject to the United States federal "Superfund" law, under which the Company has been designated as a "potentially responsible party" and may be liable for cleanup costs associated with various waste sites, some of which are on the United States Environmental Protection Agency's Superfund priority list.

As of June 30, 2018, the Company was involved in environmental remediation at various United States and non-U.S. manufacturing facilities presently or formerly operated by the Company and as a "potentially responsible party," along with other companies, at off-site waste disposal facilities and regional sites.

The Company believes that its policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and the consequent financial liability to the Company. Compliance with environmental laws and regulations requires continuing management efforts and expenditures by the Company. Compliance with environmental laws and regulations has not had in the past, and, the Company believes, will not have in the future, a material adverse effect on the capital expenditures, earnings, or competitive position of the Company.

As of June 30, 2018, the Company had a reserve of \$18.0 million for environmental matters that were probable and reasonably estimable. This reserve was recorded based upon the best estimate of costs to be incurred in light of the progress made in determining the magnitude of remediation costs, the timing and extent of remedial actions required by governmental authorities and the amount of the Company's liability in proportion to other responsible parties.

The Company's estimated total liability for the above mentioned sites ranges from a minimum of \$18.0 million to a maximum of \$81.0 million. The largest range of the estimated total liability for any one site is approximately \$9.5 million. The actual costs to be incurred by the Company will be dependent on final determination of contamination and required remedial action, negotiations with governmental authorities with respect to cleanup levels, changes in regulatory requirements, innovations in investigatory and remedial technologies, effectiveness of remedial technologies employed, the ability of the other responsible parties to pay, and any insurance or other third-party recoveries.

Energy Matters and Sources and Availability of Raw Materials

The Company's primary energy source for both of its business segments is electric power. While the Company cannot predict future costs of electric power, the primary source for production of the required electric power is expected to be coal and natural gas from substantial, proven coal and natural gas reserves available to electric utilities. The Company is subject to governmental regulations in regard to energy supplies in the United States and elsewhere. To date, the Company has not experienced any significant disruptions of its operations due to energy curtailments.

Steel, brass, copper, aluminum, nickel, rubber and thermoplastic materials and chemicals are the principal raw materials used by the Company. These materials are expected to be available from numerous sources in quantities sufficient to meet the requirements of the Company.

Employees

The Company employed approximately 57,170 persons as of June 30, 2018, of whom approximately 29,410 were employed by foreign subsidiaries.

Business Segment Information

The Company's net sales, segment operating income and assets by business segment and net sales and long-lived assets by geographic area for the past three years are included in Part II, Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference.

Acquisitions

The Company made no acquisitions during 2018. Prior-year acquisitions are discussed in Note 2 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference.

ITEM 1A. Risk Factors.

The following "risk factors" identify what the Company believes to be the risks that could materially adversely affect the Company's financial and/or operational performance. These risk factors should be considered and evaluated together with information incorporated by reference or otherwise included elsewhere in this Annual Report on Form 10-K. Additional risks not currently known to the Company or that the Company currently believes are immaterial also may impair the Company's business, financial condition, results of operations and cash flows.

The Company may be subject to risks arising from uncertainty in worldwide and regional economic conditions.

The Company's business is sensitive to global macro-economic conditions. Moderate economic growth persists in the economic regions in which the Company conducts substantial operations. Future macroeconomic downturns may have an adverse effect on the business, results of operations and financial condition of the Company and its distributors, customers and suppliers, and on activity in many of the industries and markets in which the Company and its distributors, customers and suppliers operate. Among the economic factors which may have such an effect are manufacturing and other end-market activity, currency exchange rates, air travel trends, difficulties entering new markets, tariffs and governmental trade policies, and general economic conditions such as inflation, deflation, interest rates and credit availability. These factors may, among other things, negatively impact the level of purchases, capital expenditures, and creditworthiness of the Company and its distributors, customers and suppliers, and, therefore, the Company's revenues, operating profits, margins, and order rates.

The Company cannot predict changes in worldwide or regional economic conditions, as such conditions are highly volatile and beyond the Company's control. If these conditions deteriorate or remain at depressed levels for extended periods, however, the Company's business, results of operations and financial condition could be materially adversely affected.

The Company may be subject to risks relating to its non-U.S. operations.

The Company's net sales derived from customers outside the United States were approximately 41% in 2018, 40% in 2017 and 41% in 2016. In addition, many of the Company's manufacturing operations and suppliers are located outside the United States. The Company expects net sales from non-U.S. markets to continue to represent a significant portion of its total net sales. The Company's non-U.S. operations are subject to risks in addition to those facing its domestic operations, including:

- fluctuations in currency exchange rates;
- limitations on ownership and on repatriation of earnings;
- transportation delays and interruptions;
- political, social and economic instability and disruptions;
- government embargoes or trade restrictions;
- the imposition of duties and tariffs and other trade barriers;
- import and export controls;
- labor unrest and current and changing regulatory environments;
- the potential for nationalization of enterprises;
- difficulties in staffing and managing multi-national operations;
- limitations on the Company's ability to enforce legal rights and remedies;
- · potentially adverse tax consequences; and
- difficulties in implementing restructuring actions on a timely basis.

If the Company is unable to successfully manage the risks associated with expanding its global business or adequately manage operational fluctuations internationally, the risks could have a material adverse effect on the Company's business, results of operations or financial condition.

The Company may be subject to risks relating to acquisitions and joint ventures, and risks relating to the integration of acquired companies, including risks related to the integration of CLARCOR Inc. ("Clarcor").

The Company expects to continue its strategy of identifying and acquiring businesses with complementary products and services, and entering into joint ventures, which it believes will enhance its operations and profitability. However, there can be no assurance that the Company will be able to continue to find suitable businesses to purchase or joint venture opportunities or that it will be able to acquire such businesses or enter into such joint ventures on acceptable terms. Furthermore, there are no assurances that the Company will be able to avoid acquiring or assuming unexpected liabilities. If the Company is unable to avoid these risks, its results of operations and financial condition could be materially adversely affected.

In addition, the Company may not be able to integrate successfully any businesses that it purchases into its existing business or that any acquired businesses or joint ventures will be profitable. Specifically, the Company is devoting significant management attention and resources to integrating the business practices and operations of Clarcor with the businesses of the Company. The Company may encounter or has encountered the following difficulties during the integration process of Clarcor:

- the consequences of a change in tax treatment, including the cost of integration and compliance and the possibility that the full benefits anticipated to result from the Clarcor acquisition may not be realized;
- delays in the integration of management teams, strategies, operations, products, and services;
- differences in business backgrounds, corporate cultures, and management philosophies that may delay successful integration;
- the ability to retain key employees;
- the ability to create and enforce uniform standards, controls, procedures, policies, and information systems;
- challenges of integrating complex systems, technologies, networks, and other assets of Clarcor, into the Company's, in a manner that minimizes any adverse impact or disruptions to customers, suppliers, employees, and other constituencies; and
- unknown liabilities and unforeseen increased expenses or delays associated with the integration beyond current estimates.

The successful integration of new businesses and the success of joint ventures also depend on the Company's ability to manage these new businesses and cut excess costs. If the Company is unable to avoid these risks, its results of operations and financial condition could be materially adversely affected.

The Company's results may be adversely affected if expanded operations from the acquisition of Clarcor are not effectively managed.

The Company's acquisition of Clarcor greatly expanded the size and complexity of its business. The Company's future success depends, in part, on the ability to manage this expanded business, which may pose or has posed substantial challenges for management, including challenges related to the management and monitoring of the expanded global operations and new manufacturing processes and products, and the associated costs and complexity. There can be no assurance of successful management of these matters or that the Company will realize the expected benefits of the acquisition of Clarcor.

The Company may be subject to risks relating to organizational changes.

The Company regularly executes organizational changes such as acquisitions, divestitures and realignments to support its growth and cost management strategies. The Company also engages in initiatives aimed to increase productivity, efficiencies and cash flow and to reduce costs. The Company further commits significant resources to identify, develop and retain key employees to ensure uninterrupted leadership and direction. If the Company is unable to successfully manage these and other organizational changes, the ability to complete such activities and realize anticipated synergies or cost savings as well as the Company's results of operations and financial condition could be materially adversely affected. The Company also cannot offer assurances that any of these initiatives will continue to be beneficial to the extent anticipated, or that the estimated efficiency improvements, incremental cost savings or cash flow improvements will be realized as anticipated or at all.

The Company may be subject to risks relating to its information technology systems.

The Company relies extensively on information technology systems to manage and operate its business, some of which are managed by third parties. The security and functionality of these information technology systems, and the processing of data by these systems, are critical to our business operations. If these systems, or any part of the systems, are damaged,

intruded upon, attacked, shutdown or cease to function properly (whether by planned upgrades, force majeure, telecommunications failures, hardware or software break-ins or viruses, or other cybersecurity incidents) and the Company suffers any resulting interruption in its ability to manage and operate its business or if its products are effected, the Company's results of operations and financial condition could be materially adversely affected. In addition to existing risks, any adoption or deployment of new technologies may increase our exposure to risks, breaches, or failures, which could materially adversely affect the Company's results of operations or financial condition. Furthermore, the Company may have access to sensitive, confidential, or personal data or information that may be subject to privacy and security laws, regulations, or other contractually-imposed controls. Despite the Company's use of reasonable and appropriate controls, material security breaches, theft, misplaced, lost or corrupted data, programming or employee errors, and/or malfeasance, could lead to the compromise or improper use of such sensitive, confidential, or personal data or information, resulting in possible negative consequences, such as fines, penalties, loss of reputation or competitiveness, or other negative impacts to the Company's results of operations or financial condition.

The Company may be subject to risks relating to changes in the demand for and supply of its products.

Demand for and supply of the Company's products may be adversely affected by numerous factors, some of which the Company cannot predict or control. Such factors include:

- changes in business relationships with and purchases by or from major customers, suppliers or distributors, including delays or cancellations in shipments, disputes regarding contract terms or significant changes in financial condition, and changes in contract cost and revenue estimates for new development programs;
- changes in product mix;
- changes in the market acceptance of the Company's products;
- increased competition in the markets the Company serves;
- declines in the general level of industrial production;
- weakness in the end-markets the Company serves;
- fluctuations in the availability or the prices of raw materials; and
- fluctuations in currency exchange rates.

If any of these factors occur, the demand for and supply of the Company's products could suffer, which could materially adversely affect the Company's results of operations.

The Company may be subject to risks relating to the development of new products and technologies.

The markets in which the Company operates are characterized by rapidly changing technologies and frequent introductions of new products and services. The Company's ability to develop new products based on technological innovation can affect its competitive position and often requires the investment of significant resources. If the Company does not develop, or has difficulties or delays in the development of, innovative new and enhanced products and services, or fails to gain market or regulatory acceptance of new products and technologies, the Company's revenues may be materially reduced and the Company's competitive position could be materially adversely affected. In addition, the Company may invest in research and development of products and services, or in acquisitions or other investments, that do not lead to significant revenue, which could adversely affect our profitability.

The Company may be subject to risks arising from price and supply fluctuations in raw materials used in the Company's production processes and by its suppliers of component parts.

The Company's supply of raw materials for its businesses could be interrupted for a variety of reasons, including availability and pricing. Furthermore, recently implemented changes to U.S. and other countries' tariff and import/export regulations may have a negative impact on the availability and pricing of raw materials. Prices for raw materials necessary for production have fluctuated significantly in the past and significant increases could adversely affect the Company's results of operations and profit margins. Efforts by the Company to manage these fluctuations by, among other things, passing along price increases to its customers, may be subject to a time delay between the increased raw material prices and the Company's ability to increase the price of its products, or the Company may be unable to increase the prices of its products due to pricing pressure, contract terms or other factors. Any such inability to manage fluctuations could adversely impact results of operations and cash flows.

The Company's suppliers of component parts may significantly and quickly increase their prices in response to increases in costs of raw materials that they use to manufacture the component parts. As a result, the Company may not be able to increase its prices commensurately with its increased costs. Consequently, the Company's results of operations or financial condition could be materially adversely affected.

The Company may be subject to risks arising from changes in the competitive environment in which it operates.

The Company's operations are subject to competition from a wide variety of global, regional and local competitors, which could adversely affect the Company's results of operations by creating downward pricing pressure and/or a decline in the Company's margins or market shares. To compete successfully, the Company must excel in terms of product quality and innovation, technological and engineering capability, manufacturing and distribution capability, delivery, price competitiveness, and customer experience.

The Company may be subject to risks relating to changes in its tax rates or exposure to additional income tax liabilities.

The Company is subject to income taxes in the United States and various non-U.S. jurisdictions. The Company's domestic and international tax liabilities are dependent upon the location of earnings among these different jurisdictions. On December 22, 2017, the Tax Cuts and Jobs Act, or the TCJ Act, was enacted into law. The TCJ Act significantly reforms the Internal Revenue Code of 1986, as amended, by, among other things, establishing a flat corporate U.S. income tax rate of 21 percent and creating a territorial tax system (with a one-time transition tax imposed on previously unremitted foreign earnings and profits). The Company's future results of operation could be adversely affected by changes in the Company's effective tax rate as a result of changes in tax laws and regulations or the interpretation thereof (including regulations under and interpretations of the TCJ Act), the mix of earnings in countries with differing statutory tax rates, changes in overall profitability, changes in generally accepted accounting principles, changes in the valuation of deferred tax assets or changes in tax laws or regulations. For example, the Company's estimate of the net one-time charge incurred related to the TCJ Act could differ materially from the Company's actual liability, due to, among other things, further refinement of the calculations, changes in interpretations and assumptions the Company has made, additional guidance that may be issued by the U.S. Treasury Department and Internal Revenue Service, and any other actions the Company may make as a result of the TCJ Act. In addition, the amount of income taxes paid by the Company is subject to ongoing audits by U.S. federal, state and local tax authorities and by non-U.S. tax authorities. If these audits result in assessments different from amounts reserved, future financial results may include unfavorable adjustments to the Company's tax liabilities, which could have a material adverse effect on the Company's results of operations.

The Company may be subject to product liability risks.

The Company's businesses expose it to potential product liability risks that are inherent in the design, manufacture and sale of its products and the products of third-party vendors that the Company uses or resells. Significant product liability claims could have a material adverse effect on the Company's financial condition, liquidity and results of operations. Although the Company currently maintains what it believes to be suitable and adequate product liability insurance, there can be no assurance that the Company will be able to maintain its insurance on acceptable terms or that its insurance will provide adequate protection against all potential significant liabilities.

The Company may be subject to risks arising from litigation, and legal and regulatory proceedings and obligations.

From time to time, the Company is subject to litigation or other commercial disputes and other legal and regulatory proceedings relating to its business. Due to the inherent uncertainties of any litigation, commercial disputes or other legal or regulatory proceedings, the Company cannot accurately predict their ultimate outcome, including the outcome of any related appeals. An unfavorable outcome could materially adversely impact the Company's business, financial condition or results of operations. Furthermore, as required by U.S. generally accepted accounting principles, the Company establishes reserves based on its assessment of contingencies, including contingencies related to legal claims asserted against it. Subsequent developments in legal proceedings may affect the Company's assessment and estimates of the loss contingency recorded as a reserve and require the Company to make payments in excess of our reserves, which could have an adverse effect on the Company's results of operations.

The Company is subject to national and international laws and regulations, such as the anti-corruption laws of the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, relating to its business and its employees. Despite the Company's policies, procedures and compliance programs, its internal controls and compliance systems may not be able to protect the Company from prohibited acts willfully committed by its employees, agents or business partners that would violate such applicable laws and regulations. Any such improper acts could damage the Company's reputation, subject it to civil or criminal judgments, fines or penalties, and could otherwise disrupt the Company's business, and as a result, could materially adversely impact the Company's business, financial condition or results of operations.

The Company may be subject to risks relating to the preservation of its intellectual property.

Protecting the Company's intellectual property is critical to its innovation efforts. The Company owns a number of patents, trade secrets, copyrights, trademarks, trade names and other forms of intellectual property in its products and services throughout the world and in the operation of its business. The Company also has exclusive and non-exclusive rights to intellectual property owned by others. The Company's intellectual property may be challenged or infringed upon by third parties or the Company may be unable to maintain, renew or enter into new license agreements with third-party owners of intellectual property on reasonable terms. In addition, the global nature of the Company's business increases the risk that the Company's intellectual property may be subject to infringement or other unauthorized use or disclosure by others. In some cases, the Company's ability to protect its intellectual property rights by legal recourse or otherwise may be limited, particularly in countries where laws or enforcement practices are inadequate or undeveloped. Unauthorized use or disclosure of the Company's intellectual property rights or the Company's inability to preserve existing intellectual property rights could adversely impact the Company's competitive position and results of operations.

The Company may be subject to risks arising from the impact of environmental regulations.

The Company's operations necessitate the use and handling of hazardous materials and, as a result, it is subject to various U.S. federal, state and local laws and regulations, as well as non-U.S. laws, designed to protect the environment and to regulate the discharge of materials into the environment. These laws impose penalties, fines and other sanctions for non-compliance and liability for response costs, property damages and personal injury resulting from past and current spills, disposals or other releases of, or the exposure to, hazardous materials. Among other laws, the Company is subject to the U.S. federal "Superfund" law, under which it has been designated as a "potentially responsible party" and may be liable for clean-up costs associated with various waste sites, some of which are on the United States Environmental Protection Agency's Superfund priority list. The Company could incur substantial costs as a result of non-compliance with or liability for cleanup or other costs or damages under environmental laws, including the Superfund law.

In addition, increased worldwide focus on climate change issues has led to legislative and regulatory efforts to limit greenhouse gas emissions, including regulation of such emissions through a "cap-and-trade" system globally. Increased regulation of greenhouse gas emissions and other climate change concerns could subject the Company to additional costs and restrictions, including increased energy and raw material costs. Until definitive regulations are adopted, the Company is not able to predict how such regulations would affect the Company's business, operations or financial results.

The Company may be subject to other more stringent environmental laws in the future. If more stringent environmental laws are enacted in the future, these laws could have a material adverse effect on the Company's business, results of operations and financial condition.

The Company may be subject to risks relating to increasing costs of certain employee and retiree benefits.

The funding requirements and the amount of expenses recorded for the Company's defined benefit pension plans are dependent on changes in market interest rates and the value of plan assets, which are dependent on actual plan asset returns. Significant changes in market interest rates and decreases in the fair value of plan assets and investment losses on plan assets would increase funding requirements and expenses and may adversely impact the Company's results of operations.

The Company absorbs a portion of healthcare costs for its employees. If healthcare costs rise significantly and the Company continues to absorb the majority of these costs, these increasing costs may adversely impact the Company's future results of operations.

The Company may be subject to risks arising from regulations applicable to companies doing business with the United States government.

In addition to the risks identified herein, doing business with the United States government subjects the Company to unusual risks, including dependence on the level of government spending and compliance with and changes in governmental acquisition regulations. Agreements relating to the sale of products to government entities may be subject to termination, reduction or modification, either at the convenience of the government or for the Company's failure to perform under the applicable contract. The Company is subject to government investigations of business practices and compliance with government acquisition regulations. If the Company were charged with wrongdoing as a result of any such investigation, it could be suspended from bidding on or receiving awards of new government contracts, and the Company could be subject to fines or penalties associated with contract non-compliance or resulting from such investigations, which could have a material adverse effect on the Company's results of operations.

ITEM 1C. Executive Officers of the Registrant.

The Company's executive officers as of August 15, 2018, were as follows:

Name	Position	Officer Since(1)	Age as of 8/15/2018
Thomas L. Williams	Chairman of the Board, Chief Executive Officer and Director	2005	59
Lee C. Banks	President, Chief Operating Officer and Director	2001	55
Catherine A. Suever	Executive Vice President – Finance & Administration and Chief Financial Officer	2010	59
Mark J. Hart	Executive Vice President – Human Resources & External Affairs	2016	53
William R. "Skip" Bowman	Vice President and President - Instrumentation Group	2016	60
William G. Eline	Vice President – Chief Information Officer	2002	62
Thomas C. Gentile	Vice President – Global Supply Chain	2017	46
Kurt A. Keller	Vice President and President – Asia Pacific Group	2009	60
Todd M. Leombruno	Vice President and Controller	2017	48
Joseph R. Leonti	Vice President, General Counsel and Secretary	2014	46
Robert W. Malone	Vice President and President – Filtration Group	2014	54
M. Craig Maxwell	Vice President - Chief Technology and Innovation Officer	2003	60
Jennifer A. Parmentier	Vice President and President – Engineered Materials Group	2015	51
Andrew D. Ross	Vice President and President - Fluid Connectors Group	2012	51
Roger S. Sherrard	Vice President and President – Aerospace Group	2003	52
Andrew M. Weeks	Vice President and President – Motion Systems Group	2015	55

(1) Executive officers of the Company are elected by the Board of Directors to serve for a term of one year or until their respective successors are elected, except in the case of death, resignation or removal. Messrs. Eline, Keller, Maxwell, and Sherrard have served in the executive capacities indicated above opposite their respective names during each of the past five years.

Mr. Williams has been a Director since January 2015; Chief Executive Officer since February 2015; and Chairman of the Board since January 2016. He was an Executive Vice President from August 2008 to February 2015 and an Operating Officer from November 2006 to February 2015. He is also a Director of Chart Industries, Inc.

Mr. Banks has been a Director since January 2015 and President and Chief Operating Officer since February 2015. He was an Executive Vice President from August 2008 to February 2015 and an Operating Officer from November 2006 to February 2015. He is also a Director of Nordson Corporation.

Ms. Suever has been Executive Vice President - Finance & Administration and Chief Financial Officer since April 2017. She was Vice President and Controller from December 2010 to April 2017.

Mr. Hart has been Executive Vice President - Human Resources & External Affairs since January 2016. He was Vice President - Total Rewards from August 2013 to January 2016.

Mr. Bowman has been Vice President and President - Instrumentation Group since September 2016. He was Vice President, Operations - Filtration Group from March 2015 to August 2016; and Vice President, Operations - Fluid Connectors Group from November 2007 to February 2015.

Mr. Gentile has been Vice President - Global Supply Chain since July 2017. He was General Manager of the Company's domnick hunter Process Filtration Division from December 2013 to July 2017; and Vice President, Supply Chain - Filtration Group from July 2008 to December 2013.

Mr. Leombruno has been Vice President and Controller since July 2017. He was Vice President and Controller - Engineered Materials Group from January 2015 to June 2017; and Director of Investor Relations from June 2012 to December 2014.

Mr. Leonti has been Vice President, General Counsel and Secretary since July 2014. He was Assistant Secretary from April 2011 to July 2014; and Associate General Counsel from January 2008 to July 2014.

Mr. Malone has been Vice President and President of the Filtration Group since December 2014. He was Vice President - Operations of the Filtration Group from January 2013 to December 2014.

Ms. Parmentier has been Vice President and President of the Engineered Materials Group since September 2015. She was General Manager of the Hose Products Division from May 2014 to September 2015; and General Manager of the Sporlan Division from May 2012 to May 2014.

Mr. Ross has been Vice President since July 2012 and President of the Fluid Connectors Group since September 2015. He was President of the Engineered Materials Group from July 2012 to September 2015.

Mr. Weeks has been Vice President and President of the Motion Systems Group since September 2015. He was Vice President - Operations of the Aerospace Group from April 2013 to September 2015.

ITEM 2. Properties. The Company's corporate headquarters is located in Cleveland, Ohio, and, at June 30, 2018, the Company had 310 manufacturing plants, 119 distribution centers and 157 sales and administrative offices throughout the world, none of which were individually material to its operations. The facilities are situated in 39 states within the United States and in 49 other countries. The Company owns the majority of its manufacturing plants, and its leased properties primarily consist of sales and administrative offices and distribution centers. The number of facilities used by each of the Company's operating segments is summarized by type and geographic location in the tables below:

	Type of Facility				
	Manufacturing Plants	Distribution Centers	Sales and Administrative Offices		
Diversified Industrial	291	115	144		
Aerospace Systems	19	4	13		
Total	310	119	157		

	Geographic Location								
	North America I		Asia-Pacific	Latin America					
Diversified Industrial	271	154	113	12					
Aerospace Systems	30	4	2						
Total	301	158	115	12					

Several facilities are shared between the Company's operating segments. To avoid double counting, each shared facility is counted once, primarily in the Diversified Industrial Segment.

The Company believes that its properties have been adequately maintained, are in good condition generally and are suitable and adequate for its business as presently conducted. The extent to which the Company uses its properties varies by property and from time to time. The Company believes that its restructuring efforts have brought capacity levels closer to present and anticipated needs. Most of the Company's manufacturing facilities remain capable of handling volume increases.

ITEM 3. Legal Proceedings. None.

ITEM 4. Mine Safety Disclosures. Not applicable.

<u>ITEM 5.</u> <u>Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity</u> Securities.

(a) *Market for the Registrant's Common Equity*. The Company's common stock is listed for trading on the New York Stock Exchange (NYSE) under the symbol "PH". Information regarding stock price as reported on the NYSE and dividend information with respect to the Company's common stock, is included in the table below.

(In dollars)		1st	2nd	3rd	4th	F	iscal Year
2018	High	\$ 177.61	\$ 200.82	\$ 212.80	\$ 183.91	\$	212.80
	Low	153.65	170.66	167.50	152.47		152.47
	Dividends	0.66	0.66	0.66	0.76		2.74
2017	High	\$ 126.59	\$ 145.44	\$ 161.23	\$ 166.60	\$	166.60
	Low	105.00	118.77	139.92	151.17		105.00
	Dividends	0.63	0.63	0.66	0.66		2.58
2016	High	\$ 117.98	\$ 108.00	\$ 113.51	\$ 117.78	\$	117.98
	Low	94.64	93.47	83.32	99.10		83.32
	Dividends	0.63	0.63	0.63	0.63		2.52

As of July 31, 2018, the number of shareholders of record of the Company was 3,478.

- (b) Use of Proceeds. Not Applicable.
- (c) Purchases of Equity Securities by the Issuer and Affiliated Purchasers.

ISSUER PURCHASES OF EQUITY SECURITIES

Period	(a) Total Number of Shares Purchased	Pi) Average rice Paid er Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs			
April 1, 2018 through April 30, 2018	96,100	\$	170.96	96,100	16,404,510			
May 1, 2018 through May 31, 2018	704,770	\$	166.21	704,770	15,699,740			
June 1, 2018 through June 30, 2018	97,647	\$	168.11	97,647	15,602,093			
Total	898,517	\$	166.92	898,517	15,602,093			

(1) On October 22, 2014, the Company publicly announced that the Board of Directors increased the overall maximum number of shares authorized for repurchase under this program so that, beginning on such date, the aggregate number of shares authorized for repurchase was 35 million shares. There is no limitation on the amount of shares that can be repurchased in a year. There is no expiration date for this program.

ITEM 6. Selected Financial Data.

(Amounts in thousands, except per share information)	2018	2017	2016	2015	2014
Net sales	\$ 14,302,392	\$ 12,029,312	\$ 11,360,753	\$ 12,711,744	\$ 13,215,971
Net income attributable to common shareholders	1,060,801	983,412	806,840	1,012,140	1,041,048
Basic earnings per share	7.98	7.37	5.96	7.08	6.98
Diluted earnings per share	7.83	7.25	5.89	6.97	6.87
Cash dividends per share	2.74	2.58	2.52	2.37	1.86
Total assets	15,320,087	15,489,904	12,034,142	12,254,279	13,249,907
Long-term debt	4,318,559	4,861,895	2,652,457	2,698,957	1,498,234

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

Forward-Looking Statements

Forward-looking statements contained in this and other written and oral reports are made based on known events and circumstances at the time of release, and as such, are subject in the future to unforeseen uncertainties and risks. All statements regarding future performance, earnings projections, events or developments are forward-looking statements. It is possible that the future performance and earnings projections of the Company, including its individual segments, may differ materially from current expectations, depending on economic conditions within its mobile, industrial and aerospace markets, and the Company's ability to maintain and achieve anticipated benefits associated with announced realignment activities, strategic initiatives to improve operating margins, actions taken to combat the effects of the current economic environment, and growth, innovation and global diversification initiatives. Additionally, the actual impact of the U.S. Tax Cuts and Jobs Act (TCJ Act) may affect future performance and earnings projections as the amounts reflected in this period are preliminary estimates and exact amounts will not be determined until a later date, and there may be other judicial or regulatory interpretations of the TCJ Act that may also affect these estimates and the actual impact on the Company. A change in the economic conditions in individual markets may have a particularly volatile effect on segment performance.

Among other factors which may affect future performance are:

- changes in business relationships with and purchases by or from major customers, suppliers or distributors, including delays or cancellations in shipments;
- disputes regarding contract terms or significant changes in financial condition, changes in contract cost and revenue estimates for new development programs, and changes in product mix;
- ability to identify acceptable strategic acquisition targets; uncertainties surrounding timing, successful completion
 or integration of acquisitions and similar transactions, including the integration of CLARCOR Inc. (Clarcor);
 ability to successfully divest businesses planned for divestiture and realize the anticipated benefits of such
 divestitures;
- the determination to undertake business realignment activities and the expected costs thereof and, if undertaken, the ability to complete such activities and realize the anticipated cost savings from such activities;
- ability to implement successfully the Company's capital allocation initiatives, including timing, price and execution of share repurchases;
- availability, limitations or cost increases of raw materials, component products and/or commodities that cannot be recovered in product pricing;
- ability to manage costs related to insurance and employee retirement and health care benefits;
- compliance costs associated with environmental laws and regulations;
- potential labor disruptions;
- threats associated with and efforts to combat terrorism and cyber-security risks;
- uncertainties surrounding the ultimate resolution of outstanding legal proceedings, including the outcome of any appeals;
- global competitive market conditions, including global reactions to U.S. trade polices, and resulting effects on sales and pricing; and
- global economic factors, including manufacturing activity, air travel trends, currency exchange rates, difficulties
 entering new markets and general economic conditions such as inflation, deflation, interest rates and credit
 availability.

The Company makes these statements as of the date of the filing of its Annual Report on Form 10-K for the year ended June 30, 2018, and undertakes no obligation to update them unless otherwise required by law.

Overview

The Company is a leading worldwide diversified manufacturer of motion and control technologies and systems, providing precision engineered solutions for a wide variety of mobile, industrial and aerospace markets.

The Company's order rates provide a near-term perspective of the Company's outlook particularly when viewed in the context of prior and future order rates. The Company publishes its order rates on a quarterly basis. The lead time between the time an order is received and revenue is realized generally ranges from one day to 12 weeks for mobile and industrial orders and from one day to 18 months for aerospace orders. The Company believes the leading economic indicators of these markets that have a correlation to the Company's future order rates are as follows:

- Purchasing Managers Index (PMI) on manufacturing activity specific to regions around the world with respect to most mobile and industrial markets;
- Global aircraft miles flown and global revenue passenger miles for commercial aerospace markets and Department of Defense spending for military aerospace markets; and
- Housing starts with respect to the North American residential air conditioning market and certain mobile construction markets.

A PMI above 50 indicates that the manufacturing activity specific to a region of the world in the mobile and industrial markets is expanding. A PMI below 50 indicates the opposite. Recent PMI levels for some regions around the world were as follows:

	June 30, 2018	March 31, 2018	June 30, 2017
United States	60.2	59.3	57.8
Eurozone countries	54.9	56.6	57.4
China	51.0	51.0	50.4
Brazil	49.8	53.4	50.5

Global aircraft miles flown increased by approximately six percent and global revenue passenger miles increased approximately seven percent from their comparable 2017 levels. The Company anticipates that U.S. Department of Defense spending with regards to appropriations and operations and maintenance for the U.S. Government's fiscal year 2018 will increase by approximately two percent from their fiscal 2017 level.

Housing starts in June 2018 were 11 percent lower than housing starts in March 2018 and four percent lower than housing starts in June 2017.

The Company believes many opportunities for profitable growth are available. The Company intends to focus primarily on business opportunities in the areas of energy, water, food, environment, defense, life sciences, infrastructure and transportation.

The Company believes it can meet its strategic objectives by:

- Serving the customer and continuously enhancing its experience with the Company;
- Successfully executing its Win Strategy initiatives relating to engaged people, premier customer experience, profitable growth and financial performance;
- Maintaining its decentralized division and sales company structure;
- Fostering a safety first and entrepreneurial culture;
- Engineering innovative systems and products to provide superior customer value through improved service, efficiency and productivity;
- Delivering products, systems and services that have demonstrable savings to customers and are priced by the value they deliver;
- Acquiring strategic businesses;
- Organizing around targeted regions, technologies and markets;
- Driving efficiency by implementing lean enterprise principles; and
- Creating a culture of empowerment through its values, inclusion and diversity, accountability and teamwork.

Acquisitions will be considered from time to time to the extent there is a strong strategic fit, while at the same time maintaining the Company's strong financial position. In addition, the Company will continue to assess its existing businesses and initiate efforts to divest businesses that are not considered to be a good long-term strategic fit for the Company. Future business divestitures could have a negative effect on the Company's results of operations.

The discussion below is structured to separately discuss the financial statements presented in Part II, Item 8 of this Annual Report on Form 10-K. The term "year" and references to specific years refer to the applicable fiscal year.

CONSOLIDATED STATEMENT OF INCOME

The Consolidated Statement of Income summarizes the Company's operating performance over the last three years.

(dollars in millions)	2018	 2017	 2016
Net sales	\$ 14,302	\$ 12,029	\$ 11,361
Gross profit margin	24.7%	23.6%	22.3%
Selling, general and administrative expenses	\$ 1,657	\$ 1,454	\$ 1,359
Selling, general and administrative expenses, as a percent of sales	11.6%	12.1%	12.0%
Interest expense	\$ 214	\$ 162	\$ 137
Other (income), net	(29)	(61)	(62)
(Gain) on disposal of assets	(4)	(43)	(11)
Effective tax rate	37.7%	26.0%	27.6%
Net income attributable to common shareholders	\$ 1,061	\$ 983	\$ 807

Net sales in 2018 were 18.9 percent higher than 2017. The increase in net sales in 2018 was a result of an increase in volume in both the Diversified Industrial North American and Diversified Industrial International operations and acquisitions completed during 2017, which contributed approximately \$970 million to current-year incremental net sales. The effect of currency rate changes increased net sales in 2018 by approximately \$295 million, of which \$270 million was attributable to the Diversified Industrial International operations. Net sales in 2017 were 5.9 percent higher than 2016. The increase in net sales in 2017 was primarily a result of acquisitions made in 2017 (which contributed approximately \$558 million in sales in 2017) and an increase in volume in both the Diversified Industrial International operations and the Aerospace Systems Segment, partially offset by the effect of currency rate changes (which decreased net sales in 2017 by approximately \$84 million).

Gross profit margin (calculated as net sales less cost of sales, divided by net sales) increased in 2018 primarily due to higher margins in the Aerospace Systems Segment resulting from a favorable product mix. All segments benefited from lower operating expenses related to simplification and realignment efforts. These benefits were partially offset by unfavorable product mix, unfavorable raw material prices and inefficiencies created by manufacturing facility consolidations which contributed to lower margins in the Diversified Industrial North American and Diversified Industrial International operations during 2018. Gross profit margin increased in 2017 primarily due to lower operating expenses resulting from the Company's simplification initiative and other restructuring activities, primarily experienced in the Diversified Industrial Segment, partially offset by lower margins in the Aerospace Systems Segment. Foreign currency transaction loss (relating to cash, marketable securities and other investments and intercompany transactions) included in cost of sales for 2018, 2017 and 2016 was \$7.3 million, \$8.1 million and \$22.7 million, respectively. Pension cost included in cost of sales in 2018, 2017 and 2016 was \$86.1 million, \$135.0 million and \$172.4 million, respectively. Included in cost of sales in 2018, 2017 and 2016 were business realignment charges of \$44.9 million, \$35.9 million and \$76.2 million, respectively.

Selling, general and administrative expenses increased 14.0 percent in 2018 and increased 7.0 percent in 2017. The increase in 2018 was primarily due to higher sales expense resulting from an increase in sales, higher amortization expense resulting from recent acquisitions and higher incentive compensation, partially offset by lower acquisition expenses. The increase in 2017 was primarily due to higher amortization expense resulting from recent acquisitions and higher acquisition expenses, partially offset by lower expenses resulting from the Company's simplification initiative, lower expenses associated with the Company's deferred compensation program and lower professional services expenses. Pension cost included in selling, general and administrative expenses in 2018, 2017 and 2016 was \$36.9 million, \$65.8 million and \$74.4 million, respectively. Included in selling, general and administrative expenses in 2018, 2017 and 2016 were business realignment charges of \$36.8 million, \$19.7 million and \$21.1 million, respectively.

Interest expense in 2018 increased primarily due to higher weighted-average borrowings and higher weighted-average interest rates. Interest expense in 2017 increased primarily due to higher weighted-average borrowings, partially offset by lower weighted-average interest rates.

Other (income), net in 2018, 2017 and 2016 includes \$50.5 million, \$42.4 million, and \$25.6 million of income, respectively, related to the Company's equity interests in joint ventures. Other (income), net in 2018 also includes a writedown of an investment of \$27.4 million and a loss on the sale of an investment of \$13.8 million.

(Gain) on disposal of assets includes a loss of \$20 million on the sale of a business in 2018, a gain of \$42 million related to the sale of a product line in 2017 and a gain of \$11.5 million related to the sale of businesses in 2016.

Effective tax rate in 2018 was higher than the comparable prior-year period primarily due to the net impact of one-time adjustments recorded as a result of the TCJ Act. See Note 4 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further discussion of the impact of the TCJ Act. Excluding the impact of the TCJ Act one-time adjustments, the effective tax rate for 2018 was lower primarily due to the reduced U.S. income tax rate resulting from enactment of the TCJ Act and a net increase in discrete tax benefits, partially offset by an increase in taxes related to international activities. The effective tax rate in 2017 was favorably impacted by an increase of discrete tax benefits, mostly related to stock-based compensation expense.

BUSINESS SEGMENT INFORMATION

The Business Segment information presents sales, operating income and assets on a basis that is consistent with the manner in which the Company's various businesses are managed for internal review and decision-making.

Diversified Industrial Segment

(dollars in millions)	2018		2017	2016
Sales				
North America	\$	6,727	\$ 5,367	\$ 4,955
International		5,260	4,378	4,145
Operating income				
North America		1,076	874	790
International		765	579	448
Operating income as a percent of sales				
North America		16.0%	16.3%	15.9%
International		14.5%	13.2%	10.8%
Backlog	\$	2,167	\$ 2,041	\$ 1,455
Assets		13,369	13,367	8,729
Return on average assets		13.8%	13.1%	14.2%

The Diversified Industrial Segment operations experienced the following percentage changes in net sales:

	2018	2017
Diversified Industrial North America – as reported	25.3 %	8.3 %
Acquisitions	14.9 %	8.8 %
Divestitures	(0.1)%	— %
Currency	0.4 %	(0.3)%
Diversified Industrial North America – without acquisitions, divestitures and currency	10.1 %	(0.2)%
Diversified Industrial International – as reported	20.1 %	5.6 %
Acquisitions	3.9 %	2.9 %
Divestitures	(0.2)%	— %
Currency	6.2 %	(1.6)%
Diversified Industrial International – without acquisitions, divestitures and currency	10.2 %	4.3 %
Total Diversified Industrial Segment – as reported	23.0 %	7.1 %
Acquisitions	10.0 %	6.1 %
Divestitures	(0.2)%	— %
Currency	3.0 %	(0.9)%
Total Diversified Industrial Segment – without acquisitions, divestitures and currency	10.2 %	1.9 %

The above presentation reconciles the percentage changes in net sales of the Diversified Industrial Segment reported in accordance with U.S. GAAP to percentage changes in net sales adjusted to remove the effects of acquisitions and divestitures made within the prior four fiscal quarters as well as the effects of currency exchange rates (a non-GAAP measure). The effects of acquisitions, divestitures and currency exchange rates are removed to allow investors and the Company to meaningfully evaluate the percentage changes in net sales on a comparable basis from period to period.

Sales in 2018 for the Diversified Industrial North American operations increased 25.3 percent from 2017 as compared to increasing 8.3 percent from 2016 to 2017. Acquisitions completed during 2017 contributed approximately \$798 million in incremental sales in 2018, and the effect of currency exchange rates increased sales in 2018 by \$20 million. Excluding acquisitions, divestitures and the effect of currency rate changes, sales in 2018 for the Diversified Industrial North American operations increased 10.1 percent from prior-year levels reflecting higher demand from distributors and end users in the construction equipment, cars and light trucks, heavy-duty truck, oil and gas, and general industrial machinery markets. Excluding acquisitions and the effect of currency rate changes, sales in 2017 for the Diversified Industrial North American operations remained flat from 2016 levels reflecting higher demand from distributors offset by lower demand from end users in the heavy-duty truck, cars and light trucks, life sciences, and oil and gas markets.

Sales in the Diversified Industrial International operations increased 20.1 percent in 2018 as compared to increasing 5.6 percent from 2016 to 2017. Acquisitions completed in 2017 contributed approximately \$173 million in incremental sales in 2018. The effect of currency rate changes increased sales by \$270 million, reflecting the weakening of the U.S. dollar primarily against currencies in the Eurozone countries, China and the United Kingdom. Excluding acquisitions, divestitures and the effect of currency rate changes, sales in 2018 for the Diversified Industrial International operations increased 10.2 percent from 2017 levels due to higher volume in all regions. The Asia Pacific region contributed approximately 50 percent of the increase in sales due to higher demand from distributors as well as end users in the construction equipment, semiconductor and engine markets, partially offset by lower end-user demand in the telecommunications and marine markets. Europe contributed approximately 40 percent of the increase in sales due to higher demand from distributors and end users in the construction equipment, mining, heavy-duty truck and engine markets, partially offset by lower end-user demand in the power generation market. Within Latin America, higher demand from distributors and end users in the construction equipment and heavy-duty truck markets contributed to the increase in sales.

Excluding acquisitions and the effect of currency rate changes, sales in 2017 in the Diversified Industrial International operations increased 4.3 percent from 2016, primarily due to higher volume in the Asia Pacific region and Latin America, partially offset by lower volume in Europe. Within the Asia Pacific region, higher demand was experienced from distributors as well as end users in the semiconductor, cars and light trucks, telecommunications, construction equipment and engine markets. Within Latin America, higher demand was experienced from distributors and end-user demand in the agriculture equipment market. Within Europe, higher demand from distributors and end-user demand in the construction equipment, forestry, and miscellaneous manufacturing markets was more than offset by lower end-user demand in the general industrial machinery, oil and gas, and marine markets.

The lower operating margins in 2018 in the Diversified Industrial North American operations were primarily due to an unfavorable product mix, unfavorable raw material prices, higher amortization expense and inefficiencies created by manufacturing facility consolidations, partially offset by the impact of higher sales volume and lower operating expenses resulting from prior-year restructuring activities and the Company's simplification initiative. The increase in operating margins in 2018 for the Diversified Industrial International operations was primarily due to higher sales volume and lower operating expenses resulting from restructuring activities and the Company's simplification initiative, partially offset by higher amortization expense, inefficiencies created by manufacturing facility consolidations and an unfavorable product mix.

The increase in operating margins in 2017 in the Diversified Industrial North American operations was primarily due to lower operating expenses resulting from the Company's simplification initiative and other restructuring activities, resulting in manufacturing efficiencies, partially offset by higher acquisition-related expenses and higher amortization expense. The increase in operating margins in 2017 in the Diversified Industrial International operations was primarily due to the higher sales volume, lower operating expenses resulting from restructuring activities and the Company's simplification initiative, resulting in manufacturing efficiencies.

The following business realignment charges and acquisition integration costs are included in Diversified Industrial North America and Diversified Industrial International operating income:

(dollars in millions)	2018	201	7	2016
Diversified Industrial North America	\$ 37	\$	20	\$ 31
Diversified Industrial International	41		33	60

The business realignment charges consist primarily of severance and plant closure costs related to actions taken under the Company's simplification initiative aimed at reducing organizational and process complexity, which is being implemented by its operating units throughout the world. The majority of the Diversified Industrial International business realignment charges were incurred in Europe. In addition to the business realignment charges presented in the table above, the Company recognized \$12 million of expense associated with enhanced retirement benefits in connection with a plant closure during 2016. The Company anticipates that cost savings realized from the work force reduction measures taken during 2018 will increase 2019 operating income by approximately three percent in both the Diversified Industrial North American and Diversified Industrial International operations. In 2019, the Company expects to continue to take actions necessary to structure appropriately the operations of the Diversified Industrial Segment, including the continued integration of 2017 acquisitions. Such actions are expected to result in approximately \$35 million in charges in 2019.

The Company anticipates Diversified Industrial North American sales for 2019 will increase between 2.6 and 5.6 percent from the 2018 level and Diversified Industrial International sales for 2019 will range between a 2.5 percent decrease and 0.5 percent increase from the 2018 level. Diversified Industrial North American operating margins in 2019 are expected to range from 16.4 to 17.2 percent and Diversified Industrial International margins are expected to range from 15.3 to 15.7 percent.

The increase in total Diversified Industrial Segment backlog in 2018 was primarily due to orders exceeding shipments in the Asia Pacific region and North America, with the Asia Pacific region accounting for approximately 60 percent of the increase and North America accounting for approximately 40 percent of the increase. The increase in total Diversified Industrial Segment backlog in 2017 was primarily due to recent acquisitions as well as orders exceeding shipments in all regions, with North America and Europe each accounting for approximately 40 percent of the increase. Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale.

Diversified Industrial Segment assets in 2018 remained flat as compared to the 2017 balance. At June 30, 2018, increases in cash and cash equivalents and trade accounts receivable were offset by a decrease in intangible assets. The increase in total Diversified Industrial Segment assets in 2017 was primarily due to acquisitions, partially offset by the effect of currency rate fluctuations.

Aerospace Systems Segment

(dollars in millions)		2018			2017	2016	
Sales	•	\$	2,316	\$	2,285	\$	2,260
Operating income			398		337		338
Operating income as a percent of sales			17.2%		14.8%		14.9%
Backlog		\$	1,954	\$	1,753	\$	1,762
Assets			1,447		1,413		1,431
Return on average assets		1 \$ 1,			23.7%	24.1%	

Sales in 2018 were higher than the 2017 level primarily due to higher volume in the commercial and military aftermarket businesses, partially offset by lower volume in the commercial and military original equipment manufacturer (OEM) businesses. Sales in 2017 were higher than the 2016 level primarily due to higher volume in the military OEM and commercial and military aftermarket businesses, partially offset by lower volume in the commercial OEM business.

The higher margin in 2018 was primarily due to a favorable product mix resulting from higher aftermarket volume and profitability and lower engineering development and operating expenses, partially offset by unfavorable contract settlements and higher product support costs. The slightly lower margin in 2017 was primarily due to an unfavorable OEM product mix, higher warranty-related costs, higher favorable contract settlements in 2016 and higher business realignment expenses, partially offset by higher aftermarket profitability and lower engineering development and operating expenses.

The increase in backlog in 2018 was primarily due to orders exceeding shipments in the commercial and military OEM businesses and the commercial and military aftermarket businesses. The decrease in backlog in 2017 was primarily due to shipments exceeding orders in the commercial and military OEM businesses, partially offset by orders exceeding shipments in the commercial and military aftermarket businesses. Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale.

For 2019, sales are expected to increase between 2.5 and 4.5 percent from the 2018 level and operating margins are expected to range from 17.2 to 17.6 percent. A higher concentration of commercial OEM volume in future product mix and higher than expected new product development costs could result in lower margins.

The increase in assets in 2018 was primarily due to increases in trade accounts receivable and other receivables, partially offset by a decrease in other assets. The decrease in assets in 2017 was primarily due to a decrease in trade accounts receivable, intangible assets and other assets, partially offset by an increase in cash and cash equivalents and inventory.

Corporate general and administrative expenses were \$200.9 million in 2018 compared to \$172.6 million in 2017 and \$173.2 million in 2016. As a percent of sales, corporate general and administrative expenses in both 2018 and 2017 were 1.4 percent compared to 1.5 percent in 2016. The higher expense in 2018 was primarily due to higher expenses associated with the Company's incentive compensation programs. The lower expense in 2017 was primarily due to lower expenses associated with the Company's deferred compensation program as well as lower professional services fees.

Corporate assets decreased 28.9 percent in 2018 compared to a decrease of 62.1 percent from 2016 to 2017. The decrease in Corporate assets in 2018 was primarily due to a decrease in cash and cash equivalents, partially offset by an increase in non-current deferred taxes. The decrease in Corporate assets in 2017 was primarily due to decreases in cash and cash equivalents, marketable securities and non-current deferred taxes. Decreases in these assets in 2017 primarily resulted from the Clarcor acquisition.

Other expense (in the Business Segment Information)

-	(doll	are	in	mil	lions	١
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Expense (income)	2018	2017	2016
Foreign currency transaction	\$ 7	\$ 8	\$ 23
Stock-based compensation	51	52	49
Pensions	26	78	116
Divestitures and asset sales and writedowns	(4)	(43)	(11)
Sale and writedown of investments	41	_	_
Interest income	(15)	(12)	(18)
Acquisition expenses	5	41	
Other items, net	11	3	(8)
	\$ 122	\$ 127	\$ 151

Foreign currency transaction primarily relates to the impact of changes in foreign exchange rates on cash, marketable securities and other investments and intercompany transactions. The lower pension expense in 2018 is primarily due to a lower level of amortization of past actuarial losses. The lower pension expense in 2017 is primarily due to a change in methodology to use of the spot yield curve approach to estimate the interest cost component of net periodic pension cost instead of the single-weighted average discount rate. Divestitures and asset sales and writedowns in 2018 includes a net gain on the sale of assets, partially offset by a loss on the sale of the global Facet filtration business. Divestitures and asset sales and writedowns in 2017 includes a gain on the sale of the Company's Autoline product line. Acquisition expenses in 2017 primarily relate to Clarcor (see Note 2 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion).

CONSOLIDATED BALANCE SHEET

The Consolidated Balance Sheet shows the Company's financial position at year-end, compared with the previous year-end. This discussion provides information to assist in assessing factors such as the Company's liquidity and financial resources.

(dollars in millions)	2	018	2017
Cash	\$	855	\$ 924
Trade accounts receivable, net		2,146	1,931
Inventories		1,621	1,549
Shareholders' equity		5,860	5,262
Working capital	\$	1,888	\$ 1,384
Current ratio		1.6	1.4

Cash (comprised of cash and cash equivalents and marketable securities and other investments) includes \$836 million and \$874 million held by the Company's foreign subsidiaries at June 30, 2018 and 2017, respectively. As a result of the TCJ Act, the prior worldwide tax system was replaced by a territorial tax system, which generally allows companies to repatriate future foreign source earnings without incurring additional U.S. federal taxes. However, other U.S. or foreign taxes may be incurred should cash be distributed between the Company's subsidiaries. The Company has determined it will no longer permanently reinvest certain foreign earnings. All other undistributed foreign earnings remain permanently reinvested. Refer to Note 4 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Trade accounts receivable, net are receivables due from customers for sales of product. Days sales outstanding relating to trade receivables for the Company was 51 days in both 2018 and 2017. The Company believes that its receivables are collectible and appropriate allowances for doubtful accounts have been recorded.

Inventories increased \$72 million from 2017 primarily due to a \$107 million increase in inventories in the Diversified Industrial Segment, partially offset by a decrease of \$20 million related to a sale of a business and a decrease of \$10 million in the Aerospace Systems Segment. Days supply of inventory on hand was 64 days in 2018 and 67 days in 2017.

Shareholders' equity activity during 2018 included a decrease of \$300 million related to share repurchases, an increase of \$179 million related to pensions and postretirement benefits resulting from net actuarial gains and amortizations and a decrease of \$18 million related to foreign currency translation adjustments.

CONSOLIDATED STATEMENT OF CASH FLOWS

The Consolidated Statement of Cash Flows reflects cash inflows and outflows from the Company's operating, investing and financing activities.

A summary of cash flows follows:

(dollars in millions)	2018		2017		2016
Cash provided by (used in):					
Operating activities	\$ 1,600	\$	1,302	\$	1,211
Investing activities	20		(3,365)		(265)
Financing activities	(1,682)		1,783		(843)
Effect of exchange rates	(1)		(57)		(62)
Net (decrease) increase in cash and cash equivalents	\$ (63)	\$	(337)	\$	41

Cash flows from operating activities in 2018 reflects an increase in net income from 2017 of \$77 million and a reduction of \$251 million for cash used by working capital items. Cash flows from operating activities in 2017 reflects an increase in net income from 2016 of \$177 million and a reduction of \$28 million for cash used by working capital items. Cash flows from operating activities in 2016 reflects an increase of \$120 million for cash provided by working capital items. The Company also made discretionary cash contributions to the Company's domestic qualified defined benefit plan of \$220 million in 2017 and \$200 million in 2016.

Cash flows from investing activities in 2018 benefited from proceeds related to the sale of the global Facet filtration business, and sale of plant and equipment. Cash flows from investing activity in 2017 includes \$4,069 million related to acquisition activities, primarily for the Clarcor acquisition. Cash flows from investing activities in 2018, 2017, and 2016 also includes \$3 million, \$814 million, and \$(51) million, respectively, in net maturities (purchases) of marketable securities and other investments.

Cash flows from financing activities during 2018 included the repayment of long-term debt of approximately \$945 million. Cash flows from financing activities during 2017 included the issuance of approximately \$2,646 million of notional borrowings of long-term debt as well as the repayment of long-term debt of approximately \$381 million, which includes debt assumed in the Clarcor acquisition. The Company repurchased 1.7 million common shares for \$300 million during 2018 as compared to the repurchase of 2.0 million common shares for \$265 million in 2017 and 5.1 million common shares for \$558 million in 2016.

Dividends have been paid for 272 consecutive quarters, including a yearly increase in dividends for the last 62 years. The current annual dividend rate is \$3.04 per common share.

The Company's goal is to maintain no less than an "A" rating on senior debt to ensure availability and reasonable cost of external funds. In periods following significant capital deployment, including for share repurchases or acquisitions, certain of the ratings assigned to the Company's senior debt may be, and at June 30, 2018 and 2017 were, lower than the stated goal. The Company's ability to borrow funds at desirable tenors and interest rates in 2018 and 2017 was not significantly impacted by certain ratings on senior debt that were below an "A" level. The Company does not believe that its ability to borrow funds in the future at desirable tenors and affordable interest rates will be impacted if certain of its ratings are below an "A" level at the time of such borrowings. At June 30, 2018, the long-term credit ratings assigned to the Company's senior debt securities by the credit rating agencies engaged by the Company were as follows:

Fitch Ratings	A-
Moody's Investor Services, Inc.	Baa1
Standard & Poor's	A

As of June 30, 2018, the Company had a line of credit totaling \$2,000 million through a multi-currency revolving credit agreement with a group of banks, of which \$1,466 million was available at June 30, 2018. Refer to Note 8 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

The Company is currently authorized to sell up to \$2,000 million of short-term commercial paper notes. There were \$534 million outstanding commercial paper notes as of June 30, 2018, and the largest amount of commercial paper notes outstanding during the last quarter of 2018 was \$736 million.

The Company's credit agreements and indentures governing certain debt agreements contain various covenants, the violation of which would limit or preclude the use of the applicable agreements for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the applicable agreements. The Company is in compliance with all covenants and expects to remain in compliance during the term of the credit agreements and indentures.

Contractual Obligations - The total amount of gross unrecognized tax benefits, including interest, for uncertain tax positions was \$175 million at June 30, 2018. Payment of these obligations would result from settlements with worldwide taxing authorities. Due to the difficulty in determining the timing of the settlements, these obligations are not included in the following summary of the Company's fixed contractual obligations. References to Notes are to the Notes to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

(dollars in millions)	Payments due by period									
Contractual obligations		Total		Less than 1 year		1-3 years		3-5 years	N	Iore than 5 years
Transition tax payments related to TCJ Act (Note 4)	\$	255	\$	20	\$	41	\$	41	\$	153
Long-term debt (Note 9)		4,460		100		_		417		3,943
Interest on long-term debt		2,375		152		303		279		1,641
Operating leases (Note 9)		226		79		92		27		28
Retirement benefits (Note 10)		124		76		12		11		25
Total	\$	7,440	\$	427	\$	448	\$	775	\$	5,790

OFF-BALANCE SHEET ARRANGEMENTS

The Company does not have off-balance sheet arrangements.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The policies discussed below are considered by management to be more critical than other policies because their application places the most significant demands on management's judgment.

Revenue Recognition - Substantially all of the Diversified Industrial Segment revenues are recognized when persuasive evidence of an arrangement exists, product has shipped and the risks and rewards of ownership have transferred or services have been rendered, the price to the customer is fixed and determinable and collectibility is reasonably assured, which is generally at the time the product is shipped. The Aerospace Systems Segment recognizes revenues primarily using the percentage-of-completion method, and the extent of progress toward completion is primarily measured using the units-of-delivery method. The Company estimates costs to complete long-term contracts for purposes of evaluating and establishing contract reserves. The estimation of these costs requires judgment on the part of management due to the duration of the contractual agreements as well as the technical nature of the products involved. Adjustments to cost estimates are made on a consistent basis and a contract reserve is established when the estimated costs to complete a contract exceed the expected contract revenues.

Impairment of Goodwill and Long-Lived Assets - Goodwill is tested for impairment, at the reporting unit level, on an annual basis and between annual tests whenever events or circumstances indicate that the carrying value of a reporting unit may exceed its fair value. For the Company, a reporting unit is one level below the operating segment level. Determining whether an impairment has occurred requires the valuation of the respective reporting unit, which the Company has consistently estimated using primarily a discounted cash flow model. The Company believes that the use of a discounted cash flow model results in the most accurate calculation of a reporting unit's fair value since the market value for a reporting unit is not readily available. The discounted cash flow analysis requires several assumptions including future sales growth and operating margin levels as well as assumptions regarding future industry specific market conditions. Each reporting unit regularly prepares discrete operating forecasts and uses these forecasts as the basis for the assumptions used in the discounted cash flow analysis. The Company has consistently used a discount rate commensurate with its cost of capital, adjusted for inherent business risks, and an appropriate terminal growth factor. The Company also reconciles the estimated aggregate fair value of its reporting units as derived from the discounted cash flow analysis to the Company's overall market capitalization.

The results of the Company's 2018 annual goodwill impairment test performed as of December 31, 2017 indicated that no goodwill impairment existed. However, certain reporting units within the Diversified Industrial Segment had estimated fair values that the Company determined, from a quantitative and qualitative perspective, were not significantly in excess of their carrying values. For these reporting units, the sales growth assumptions had the most significant influence on the estimation of fair value. The key uncertainties in these sales growth assumptions include end-market growth, the ability to secure business with new customers and new product development. The Company continually monitors its reporting units for impairment indicators and updates assumptions used in the most recent calculation of the fair value of a reporting unit as appropriate. The Company is unaware of any current market trends that are contrary to the assumptions made in the estimation of the fair value of any of its reporting units. If actual experience is not consistent with the assumptions made in the estimation of the fair value of the reporting units, it is possible that the estimated fair value of certain reporting units could fall below their carrying value resulting in the necessity to conduct additional goodwill impairment tests.

Long-lived assets held for use, which primarily includes finite-lived intangible assets and plant and equipment, are evaluated for impairment whenever events or circumstances indicate that the undiscounted net cash flows to be generated by their use over their expected useful lives and eventual disposition are less than their carrying value. The long-term nature of these assets requires the estimation of their cash inflows and outflows several years into the future and only takes into consideration technological advances known at the time of the impairment test. During 2018, there were no events or circumstances that indicated that the carrying value of the Company's long-lived assets held for use were not recoverable.

Pensions - The annual net periodic expense and benefit obligations related to the Company's defined benefit plans are determined on an actuarial basis. This determination requires critical assumptions regarding the discount rate, long-term rate of return on plan assets, increases in compensation levels and amortization periods for actuarial gains and losses. Assumptions are determined based on Company data and appropriate market indicators, and are evaluated each year as of the plans' measurement date. Changes in the assumptions to reflect actual experience as well as the amortization of actuarial gains and losses could result in a material change in the annual net periodic expense and benefit obligations reported in the financial statements. Beginning in 2017, the Company changed the method used to estimate the service and interest cost components of net periodic pension and other postretirement benefit costs from the single-weighted average discount rate to spot yield curve approach. The change does not affect the measurement of the Company's benefit obligations. The new method provides a more precise measure of service and interest costs by improving the correlation between projected benefit cash flows and the discrete spot yield curve rates and was accounted for as a change in estimate prospectively beginning in the first quarter of 2017. Annual net periodic pension expense in 2017 was lower by approximately \$30 million compared to the previous method. Annual net periodic postretirement cost was not materially different.

For the Company's domestic qualified defined benefit plan, a 50 basis point change in the assumed long-term rate of return on plan assets is estimated to have a \$14 million effect on annual pension expense and a 50 basis point decrease in the discount rate is estimated to increase annual pension expense by \$17 million. As of June 30, 2018, \$841 million of past years' net actuarial losses related to the Company's domestic qualified defined benefit plan are subject to amortization in the future. These losses will generally be amortized over approximately seven years and will negatively affect earnings in the future. Actuarial gains experienced in future years will help reduce the effect of the net actuarial loss amortization. Further information on pensions is provided in Note 10 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Income Taxes - Significant judgment is required in determining the Company's income tax expense and in evaluating tax positions. Deferred income tax assets and liabilities have been recorded for the differences between the financial accounting and income tax basis of assets and liabilities. Factors considered by the Company in determining the probability of realizing deferred income tax assets include forecasted operating earnings, available tax planning strategies and the time period over which the temporary differences will reverse. The Company reviews its tax positions on a regular basis and adjusts the balances as new information becomes available. For those tax positions where it is more likely than not that a tax benefit will be sustained, the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon examination by a taxing authority that has full knowledge of all relevant information will be recorded. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit has been recognized in the Consolidated Financial Statements.

On December 22, 2017, the TCJ Act was enacted into law. The TCJ Act significantly reforms the Internal Revenue Code of 1986, as amended, by among other things, lowering the U.S. corporate income tax rate and creating a territorial tax system (with a one time transition tax imposed on previously unremitted foreign earnings and profits). The Securities and Exchange Commission staff issued Staff Accounting Bulletin 118 (SAB 118), which provides guidance on accounting for the tax effects of the TCJ Act. SAB 118 provides a measurement period that should not extend beyond one year of the TCJ Act's enactment date, to complete the applicable accounting of the related tax impacts of the TCJ Act. The final impact of the TCJ Act may differ from the provisional amounts recorded in the current period, due to, among other things, any updates to estimates that have been utilized in the calculation of the tax impacts, changes in interpretation of the existing law, or additional guidance from U. S. Treasury department or the Internal Revenue Service.

Further information on income taxes is provided in Note 4 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Loss Contingencies - The Company has a number of loss exposures incurred in the ordinary course of business such as environmental claims, product liability and litigation reserves. Establishing loss accruals for these matters requires management's estimate and judgment with regards to risk exposure and ultimate liability or realization. These loss accruals are reviewed periodically and adjustments are made to reflect the most recent facts and circumstances.

RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

Recently issued accounting pronouncements are described in Note 1 to the Consolidated Financial Statements, included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk.

The Company manages foreign currency transaction and translation risk by utilizing derivative and non-derivative financial instruments, including forward exchange contracts, costless collar contracts, cross-currency swap contracts and certain foreign denominated debt designated as net investment hedges. The derivative financial instrument contracts are with major investment grade financial institutions and the Company does not anticipate any material non-performance by any of the counterparties. The Company does not hold or issue derivative financial instruments for trading purposes.

Derivative financial instruments are recognized on the Consolidated Balance Sheet as either assets or liabilities and are measured at fair value. Further information on the fair value of these contracts is provided in Part II, Item 8 of this Annual Report on Form 10-K. Gains or losses on derivatives that are not hedges are adjusted to fair value through the Consolidated Statement of Income. Gains or losses on derivatives that are hedges are adjusted to fair value through accumulated other comprehensive income (loss) in the Consolidated Balance Sheet until the hedged item is recognized in earnings. The translation of the foreign denominated debt that has been designated as a net investment hedge is recorded in accumulated other comprehensive income (loss) and remains there until the underlying net investment is sold or substantially liquidated.

The Company's debt portfolio contains variable rate debt, inherently exposing the Company to interest rate risk. The Company's objective is to maintain a 60/40 mix between fixed rate and variable rate debt thereby limiting its exposure to changes in near-term interest rates. A 100 basis point increase in near-term interest rates would increase annual interest expense on variable rate debt existing at June 30, 2018 by approximately \$7 million.

ITEM 8. Financial Statements and Supplementary Data.

	Page Number in Form 10-K
Financial Statements	
Consolidated Statement of Income	32
Consolidated Statement of Comprehensive Income	33
Business Segment Information	34
Consolidated Balance Sheet	36
Consolidated Statement of Cash Flows	37
Consolidated Statement of Equity	38
Notes to Consolidated Financial Statements	39

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Parker-Hannifin Corporation Cleveland, Ohio

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Parker-Hannifin Corporation and subsidiaries (the "Company") as of June 30, 2018 and 2017, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended June 30, 2018, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of June 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 30, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 2018, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (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 the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/S/ DELOITTE & TOUCHE, LLP

Cleveland, Ohio August 24, 2018

We have served as the Company's auditor since 2008.

CONSOLIDATED STATEMENT OF INCOME

	For the years ended June 30,							
(Dollars in thousands, except per share amounts)		2018		2017		2016		
Net Sales	\$	14,302,392	\$	12,029,312	\$	11,360,753		
Cost of sales		10,762,841		9,188,962		8,823,384		
Selling, general and administrative expenses		1,657,152		1,453,935		1,359,360		
Interest expense		213,873		162,436		136,517		
Other (income), net		(29,268)		(61,401)		(62,199)		
(Gain) on disposal of assets (Note 2)		(4,483)		(43,261)		(11,037)		
Income before income taxes		1,702,277		1,328,641		1,114,728		
Income taxes (Note 4)		640,962		344,797		307,512		
Net Income		1,061,315		983,844		807,216		
Less: Noncontrolling interest in subsidiaries' earnings		514		432		376		
Net Income Attributable to Common Shareholders	\$	1,060,801	\$	983,412	\$	806,840		
Earnings per Share Attributable to Common Shareholders (Note 5)								
Basic earnings per share	\$	7.98	\$	7.37	\$	5.96		
Diluted earnings per share	\$	7.83	\$	7.25	\$	5.89		

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	For the years ended June 30,								
(Dollars in thousands)		2018		2017		2016			
Net Income	\$	1,061,315	\$	983,844	\$	807,216			
Less: Noncontrolling interests in subsidiaries' earnings		514		432		376			
Net income attributable to common shareholders		1,060,801		983,412		806,840			
Other comprehensive income (loss), net of tax									
Foreign currency translation adjustment and other (net of tax of \$16,964, \$40,935 and \$(2,342) in 2018, 2017 and 2016)		(18,575)		(80,865)		(203,299)			
Retirement benefits plan activity (net of tax of \$(82,506), \$(218,590) and \$152,203 in 2018, 2017 and 2016)		179,253		384,784		(286,044)			
Other comprehensive income (loss)		160,678		303,919		(489,343)			
Less: Other comprehensive income (loss) for noncontrolling interests		(440)		358		(196)			
Other comprehensive income (loss) attributable to common shareholders		161,118		303,561		(489,147)			
Total Comprehensive Income Attributable to Common Shareholders	\$	1,221,919	\$	1,286,973	\$	317,693			

BUSINESS SEGMENT INFORMATION

(Dollars in thousands)		2018	2017	2016
Net Sales:				
Diversified Industrial:				
North America	\$	6,726,900	\$ 5,366,809	\$ 4,955,211
International		5,259,793	4,377,776	4,145,272
Aerospace Systems		2,315,699	2,284,727	2,260,270
	\$	14,302,392	\$ 12,029,312	\$ 11,360,753
Segment Operating Income:	<u>'</u>			
Diversified Industrial:				
North America	\$	1,076,021	\$ 873,552	\$ 789,667
International		765,188	579,207	448,457
Aerospace Systems		397,970	337,496	337,531
Total segment operating income		2,239,179	1,790,255	1,575,655
Corporate administration		200,901	172,632	173,203
Income before interest expense and other expense		2,038,278	1,617,623	1,402,452
Interest expense		213,873	162,436	136,517
Other expense		122,128	126,546	151,207
Income before income taxes	\$	1,702,277	\$ 1,328,641	\$ 1,114,728
Assets:				
Diversified Industrial	\$	13,368,619	\$ 13,366,981	\$ 8,728,671
Aerospace Systems (a)		1,446,745	1,412,707	1,430,577
Corporate		504,723	710,216	1,874,894
	\$	15,320,087	\$ 15,489,904	\$ 12,034,142
Property Additions:				
Diversified Industrial	\$	196,469	\$ 148,765	\$ 134,618
Aerospace Systems		15,225	16,929	10,857
Corporate		35,973	38,054	3,932
	\$	247,667	\$ 203,748	\$ 149,407
Depreciation:				
Diversified Industrial	\$	211,648	\$ 176,823	\$ 163,014
Aerospace Systems		16,737	17,484	18,469
Corporate		9,421	8,561	8,825
	\$	237,806	\$ 202,868	\$ 190,308

International 5,323,902 4,443,623 4,216,272 \$ 14,302,392 \$ 12,029,312 \$ 11,360,753	(Dollars in thousands)	2018		2018 2017		 2016
North America \$ 8,978,490 \$ 7,585,689 \$ 7,144,481 International 5,323,902 4,443,623 4,216,272 \$ 14,302,392 \$ 12,029,312 \$ 11,360,753	By Geographic Area (b)					
International 5,323,902 4,443,623 4,216,272 \$ 14,302,392 \$ 12,029,312 \$ 11,360,753	Net Sales:					
\$ 14,302,392 \$ 12,029,312 \$ 11,360,753	North America	\$	8,978,490	\$	7,585,689	\$ 7,144,481
	International		5,323,902		4,443,623	4,216,272
Long Lived Accepts		\$	14,302,392	\$	12,029,312	\$ 11,360,753
Long-Liveu Assets.	Long-Lived Assets:					
North America \$ 1,103,308 \$ 1,145,127 \$ 817,872	North America	\$	1,103,308	\$	1,145,127	\$ 817,872
International 752,929 792,165 750,228	International		752,929		792,165	750,228
\$ 1,856,237 \$ 1,937,292 \$ 1,568,100		\$	1,856,237	\$	1,937,292	\$ 1,568,100

The accounting policies of the business segments are the same as those described in the Significant Accounting Policies footnote except that the business segment results are prepared on a basis that is consistent with the manner in which the Company's management disaggregates financial information for internal review and decision-making.

- (a) Includes an investment in a joint venture in which ownership is 50 percent or less and in which the Company does not have operating control (2018 \$235,665; 2017 \$240,182; 2016 \$241,728).
- (b) Net sales are attributed to countries based on the location of the selling unit. North America includes the United States, Canada and Mexico. No country other than the United States represents greater than 10 percent of consolidated sales. Long-lived assets are comprised of plant and equipment based on physical location.

CONSOLIDATED BALANCE SHEET

(Dollars in thousands)

June 30,	2018		2017
Assets			
Current Assets			
Cash and cash equivalents (Note 1)	\$	822,137	\$ 884,886
Marketable securities and other investments (Note 1)		32,995	39,318
Trade accounts receivable, net (Note 1)		2,145,517	1,930,751
Non-trade and notes receivable (Note 1)		328,399	254,987
Inventories (Note 6)		1,621,304	1,549,494
Prepaid expenses		134,886	120,282
Total Current Assets		5,085,238	4,779,718
Plant and equipment (Note 1)		5,215,253	5,186,748
Less: Accumulated depreciation		3,359,016	3,249,456
Plant and equipment, net		1,856,237	1,937,292
Deferred income taxes (Notes 1 and 4)		57,623	36,057
Investments and other assets (Note 1)		801,049	842,475
Intangible assets, net (Notes 1 and 7)		2,015,520	2,307,484
Goodwill (Notes 1 and 7)		5,504,420	5,586,878
Total Assets	\$	15,320,087	\$ 15,489,904
Liabilities and Equity			
Current Liabilities			
Notes payable and long-term debt payable within one year (Notes 8 and 9)	\$	638,466	\$ 1,008,465
Accounts payable, trade		1,430,306	1,300,496
Accrued payrolls and other compensation		427,500	435,911
Accrued domestic and foreign taxes		198,878	153,137
Other accrued liabilities		502,333	497,851
Total Current Liabilities		3,197,483	3,395,860
Long-term debt (Note 9)		4,318,559	4,861,895
Pensions and other postretirement benefits (Note 10)		1,177,605	1,406,082
Deferred income taxes (Notes 1 and 4)		234,858	221,790
Other liabilities		526,089	336,931
Total Liabilities		9,454,594	10,222,558
Equity (Note 11)			
Shareholders' Equity			
Serial preferred stock, \$.50 par value, authorized 3,000,000 shares; none issued			_
Common stock, \$.50 par value, authorized 600,000,000 shares; issued 181,046,128 shares in 2018 and 2017		90,523	90,523
Additional capital		496,592	543,879
Retained earnings		11,625,975	10,930,348
Accumulated other comprehensive (loss)		(1,763,086)	(1,924,204
Treasury shares at cost: 48,632,105 in 2018 and 47,854,475 in 2017		(4,590,138)	(4,378,897
Total Shareholders' Equity		5,859,866	5,261,649
Noncontrolling interests		5,627	5,697
Total Equity		5,865,493	5,267,346
Total Liabilities and Equity	\$	15,320,087	\$ 15,489,904

CONSOLIDATED STATEMENT OF CASH FLOWS

		For the years ended June 30,								
(Dollars in thousands)		2018	2017		2016					
Cash Flows From Operating Activities										
Net income	\$	1,061,315	\$ 983,844	\$	807,216					
Adjustments to reconcile net income to net cash provided by operating activities:										
Depreciation		237,806	202,868		190,308					
Amortization		228,279	152,361		116,535					
Stock incentive plan compensation		118,831	80,339		71,293					
Deferred income taxes		(41,412)	37,024		(65,686)					
Foreign currency transaction loss		7,284	8,060		22,750					
(Gain) loss on sale of plant and equipment		(24,422)	1,494		414					
Loss (gain) on sale of businesses		19,666	(41,285)	(10,666)					
Loss on sale and impairment of investments		41,219	_		_					
(Gain) on sale of marketable securities		(2)	(1,032)	(723)					
Changes in assets and liabilities, net of effects from acquisitions:										
Accounts receivable		(301,978)	(95,347)	17,549					
Inventories		(92,209)	(73,673)	120,243					
Prepaid expenses		(16,206)	2,410		136,034					
Other assets		(13,293)	(3,887)	(5,033)					
Accounts payable, trade		125,907	174,761		(52,378)					
Accrued payrolls and other compensation		(4,614)	5,922		(22,865)					
Accrued domestic and foreign taxes		44,019	18,165		(6,285)					
Other accrued liabilities		(5,567)	(59,738)	(31,633)					
Pensions and other postretirement benefits		31,239	(103,866)	(45,796)					
Other liabilities		184,425	14,051		(30,499)					
Net cash provided by operating activities		1,600,287	1,302,471		1,210,778					
Cash Flows From Investing Activities										
Acquisitions (less cash acquired of \$157,426 in 2017 and \$3,814 in 2016)		_	(4,069,197)	(67,552)					
Capital expenditures		(247,667)	(203,748)	(149,407)					
Proceeds from sale of plant and equipment		81,881	14,648		18,821					
Proceeds from sale of businesses		177,741	85,610		24,325					
Purchase of marketable securities and other investments		(80,607)	(465,666)	(1,351,464)					
Maturities and sales of marketable securities and other investments		83,905	1,279,318		1,300,633					
Other		4,837	(6,113)	(39,995)					
Net cash provided by (used in) investing activities		20,090	(3,365,148)	(264,639)					
Cash Flows From Financing Activities					, , ,					
Proceeds from exercise of stock options		3,682	2,202		126					
Payments for common shares		(381,041)	(338,078)	(587,365)					
Proceeds from notes payable, net		4,115	230,499		303,624					
Proceeds from long-term borrowings		1,189	2,614,463		2,287					
Payments for long-term borrowings		(944,629)	(381,078		(220,068)					
Dividends paid		(365,288)	(345,380		(341,962)					
Net cash (used in) provided by financing activities		(1,681,972)	1,782,628		(843,358)					
Effect of exchange rate changes on cash		(1,154)	(56,718		(61,712)					
Net (decrease) increase in cash and cash equivalents		(62,749)	(336,767		41,069					
Cash and cash equivalents at beginning of year		884,886	1,221,653		1,180,584					
Cash and cash equivalents at end of year	\$	822,137			1,221,653					
Supplemental Data:	-			Ť	.,==1,000					
Cash paid during the year for:										
	•	200,860	\$ 131,937	\$	133,999					
Interest	\$	∠ ∪∪.∂0∪	/ רצורו ק	Α,	111999					

CONSOLIDATED STATEMENT OF EQUITY

(Dollars in thousands)	ommon Stock	dditional Capital	Retained Earnings	A	ccumulated Other Comprehensive (Loss)	Treasury Shares	Noncontrolling Interests	Total
Balance June 30, 2015	\$ 90,523	\$ 622,729	\$ 9,841,885	\$	(1,738,618)	\$ (3,712,232)	\$ 3,282	\$ 5,107,569
Net income			806,840				376	807,216
Other comprehensive income (loss)					(489,147)		(196)	(489,343)
Dividends paid			(341,923)				(39)	(341,962)
Stock incentive plan activity		5,722	(3,936)			50,916		52,702
Shares purchased at cost						(557,504)		(557,504)
Balance June 30, 2016	\$ 90,523	\$ 628,451	\$ 10,302,866	\$	(2,227,765)	\$ (4,218,820)	\$ 3,423	\$ 4,578,678
Net income			983,412				432	983,844
Other comprehensive income (loss)					303,561		358	303,919
Dividends paid			(345,042)				(338)	(345,380)
Stock incentive plan activity		(84,572)	(10,888)			104,615		9,155
Acquisition activity							1,822	1,822
Shares purchased at cost						(264,692)		(264,692)
Balance June 30, 2017	\$ 90,523	\$ 543,879	\$ 10,930,348	\$	(1,924,204)	\$ (4,378,897)	\$ 5,697	\$ 5,267,346
Net income			1,060,801				514	1,061,315
Other comprehensive income (loss)					161,118		(440)	160,678
Dividends paid			(365,174)				(114)	(365,288)
Stock incentive plan activity		(47,287)				88,759		41,472
Acquisition activity							(30)	(30)
Shares purchased at cost						(300,000)		(300,000)
Balance June 30, 2018	\$ 90,523	\$ 496,592	\$ 11,625,975	\$	(1,763,086)	\$ (4,590,138)	\$ 5,627	\$ 5,865,493

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands, except per share amounts)

The term "year" and references to specific years refer to the applicable fiscal years.

1. Significant Accounting Policies

The significant accounting policies followed in the preparation of the accompanying consolidated financial statements are summarized below.

Nature of Operations - The Company is a leading worldwide diversified manufacturer of motion and control technologies and systems, providing precision engineered solutions for a wide variety of mobile, industrial and aerospace markets. The Company evaluates performance based on segment operating income before corporate administrative expenses, interest expense and income taxes.

The Diversified Industrial Segment is an aggregation of several business units, which manufacture motion-control and fluid power system components for builders and users of various types of manufacturing, packaging, processing, transportation, agricultural, construction, and military vehicles and equipment. Diversified Industrial Segment products are marketed primarily through field sales employees and independent distributors. The Diversified Industrial North American operations have manufacturing plants and distribution networks throughout the United States, Canada and Mexico and primarily service North America. The Diversified Industrial International operations provide Parker products and services to 47 countries throughout Europe, Asia Pacific, Latin America, the Middle East and Africa.

The Aerospace Systems Segment produces hydraulic, fuel, pneumatic and electro-mechanical systems and components, which are utilized on virtually every domestic commercial, military and general aviation aircraft and also performs a vital role in naval vessels and land-based weapons systems. This segment serves original equipment and maintenance, repair and overhaul customers worldwide. Aerospace Systems Segment products are marketed by field sales employees and are sold directly to manufacturers and end users.

There are no individual customers to whom sales are more than three percent of the Company's consolidated sales. Due to the diverse group of customers throughout the world, the Company does not consider itself exposed to any concentration of credit risks.

The Company manufactures and markets its products throughout the world. Although certain risks and uncertainties exist, the diversity and breadth of the Company's products and geographic operations mitigate the risk that adverse changes with respect to any particular product and geographic operation would materially affect the Company's operating results.

Use of Estimates - The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Basis of Consolidation - The consolidated financial statements include the accounts of all majority-owned domestic and foreign subsidiaries. All intercompany transactions and profits have been eliminated in the consolidated financial statements. The Company does not have off-balance sheet arrangements. Within the Business Segment Information, intersegment and interarea sales have been eliminated.

Revenue Recognition - Revenue is recognized when persuasive evidence of an arrangement exists, product has shipped and the risks and rewards of ownership have transferred or services have been rendered, the price to the customer is fixed and determinable and collectibility is reasonably assured, which is generally at the time the product is shipped. Shipping and handling costs billed to customers are included in net sales and the related costs in cost of sales. Taxes collected from customers and remitted to governmental authorities are excluded from revenue.

Long-term Contracts - The Company enters into long-term contracts primarily for the production of aerospace products. For financial statement purposes, revenues are primarily recognized using the percentage-of-completion method. The extent of progress toward completion is primarily measured using the units-of-delivery method. Unbilled costs on these contracts are included in inventory. Progress payments are netted against the inventory balances. The Company estimates costs to complete long-term contracts for purposes of evaluating and establishing contract reserves. Adjustments to cost estimates are made on a consistent basis and a contract reserve is established when the estimated costs to complete a contract exceed the expected contract revenues.

Cash - Cash equivalents consist of short-term highly liquid investments, with a three-month or less maturity, carried at cost plus accrued interest, which are readily convertible into cash.

Marketable Securities and Other Investments - Consist of short-term highly liquid investments, with stated maturities of greater than three months from the date of purchase, carried at cost plus accrued interest, and investments classified as available-for-sale, which are carried at fair value with unrealized gains and losses recorded in accumulated other comprehensive (loss). Gains and losses on available-for-sale investments are calculated based on the first-in, first-out method. The Company has the ability to liquidate the available-for-sale investments after giving appropriate notice to the issuer.

Trade Accounts Receivable, Net - Trade accounts receivable are initially recorded at their net collectible amount and are generally recorded at the time the revenue from the sales transaction is recorded. Receivables are written off to bad debt primarily when, in the judgment of the Company, the receivable is deemed to be uncollectible due to the insolvency of the debtor. Allowance for doubtful accounts was \$9,672 and \$14,336 at June 30, 2018 and 2017, respectively.

Non-Trade and Notes Receivable - The non-trade and notes receivable caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	2018	2017
Notes receivable	\$ 149,254	\$ 118,351
Accounts receivable, other	179,145	136,636
Total	\$ 328,399	\$ 254,987

Plant, Equipment and Depreciation - Plant and equipment are recorded at cost and are depreciated principally using the straight-line method for financial reporting purposes. Depreciation rates are based on estimated useful lives of the assets, generally 40 years for buildings, 15 years for land improvements and building equipment, seven to 10 years for machinery and equipment, and three to eight years for vehicles and office equipment. Improvements, which extend the useful life of property, are capitalized, and maintenance and repairs are expensed. The Company reviews plant and equipment for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable. When plant and equipment are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the appropriate accounts and any gain or loss is included in current income.

The plant and equipment caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	2018	2017
Land and land improvements	\$ 289,686	\$ 321,331
Buildings and building equipment	1,578,701	1,575,464
Machinery and equipment	3,218,639	3,167,885
Construction in progress	128,227	122,068
Total	\$ 5,215,253	\$ 5,186,748

Investments and Other Assets - Investments in joint-venture companies in which ownership is 50 percent or less and in which the Company does not have operating control are stated at cost plus the Company's equity in undistributed earnings and amounted to \$304,389 and \$341,869 at June 30, 2018 and 2017, respectively. A significant portion of the underlying net assets of the joint ventures are related to goodwill. The Company's share of earnings from investments in joint-venture companies were \$50,473, \$42,352 and \$25,650 in 2018, 2017 and 2016, respectively.

Intangible Assets - Intangible assets primarily include patents, trademarks and customer lists and are recorded at cost and amortized on a straight-line method. Patents are amortized over the shorter of their remaining useful or legal life. Trademarks are amortized over the estimated time period over which an economic benefit is expected to be received. Customer lists are amortized over a period based on anticipated customer attrition rates. The Company reviews intangible assets for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable.

Goodwill - The Company conducts a formal impairment test of goodwill on an annual basis and between annual tests if an event occurs or circumstances change that would, more likely than not, reduce the fair value of a reporting unit below its carrying value.

Income Taxes - Income taxes are provided based upon income for financial reporting purposes. Tax credits and similar tax incentives are applied to reduce the provision for income taxes in the year in which the credits arise. The Company recognizes accrued interest related to unrecognized tax benefits in income tax expense. Penalties, if incurred, are recognized in income tax expense. Deferred income taxes arise from temporary differences in the recognition of income and expense for tax purposes.

Foreign Currency Translation - Assets and liabilities of foreign subsidiaries are translated at current exchange rates, and income and expenses are translated using weighted-average exchange rates. The effects of these translation adjustments, as well as gains and losses from certain intercompany transactions, are reported in the accumulated other comprehensive (loss) component of shareholders' equity. Such adjustments will affect net income only upon sale or liquidation of the underlying foreign investments. Exchange losses (gains) from transactions in a currency other than the local currency of the entity involved are included within the cost of sales caption in the Consolidated Statement of Income and were \$7,284, \$8,060 and \$22,750, in 2018, 2017 and 2016, respectively.

Subsequent Events - The Company has evaluated subsequent events that have occurred through the date of filing of this Annual Report on Form 10-K for the year ended June 30, 2018. No subsequent events occurred that required adjustment to or disclosure in these financial statements.

Recent Accounting Pronouncements - In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." ASU 2018-02 allows for a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the TCJ Act reduction of the U.S. federal corporate income tax rate. The amendments also require certain disclosures about stranded tax effects. ASU 2018-02 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted in any period after the issuance of the update. The amendments in this update should be applied either in the period of adoption or retrospectively to each period in which the effect of the change in the U.S. federal corporate income tax rate in the TCJ Act is recognized. The Company has not yet determined the effect that ASU 2018-02 will have on its financial statements.

In August 2017, the FASB issued ASU 2017-12, "Targeted Improvements to Accounting for Hedging Activities." ASU 2017-12 provides targeted improvements to Topic 815 accounting for hedging activities by expanding an entity's ability to hedge non-financial and financial risk components and reduce complexity in fair value hedges of interest rate risk. The guidance eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. The guidance also eases certain documentation and assessment requirements and modifies the accounting for components excluded from the assessment of hedge effectiveness. ASU 2017-12 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early application is permitted in any interim period after issuance of the update. ASU 2017-12 should be applied using a modified retrospective approach for cash flow and net investment hedge relationships that exist on the date of adoption and prospectively for presentation and disclosure requirements. The Company has not yet determined the effect that ASU 2017-12 will have on its financial statements.

In May 2017, the FASB issued ASU 2017-09, "Scope of Modification Accounting." ASU 2017-09 provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. An entity should account for the effects of a modification unless all of the following are met: (1) the fair value of the modified award is the same as fair value of the original award; (2) the vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the original award is modified; and (3) the classification of the award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the original award is modified. ASU 2017-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption is permitted. ASU 2017-09 should be applied prospectively to an award modified on or after the adoption date. During the first quarter of fiscal 2018, the Company adopted ASU 2017-09. The adoption of ASU 2017-09 did not affect the Company's financial statements as there were no modifications of any share-based awards during 2018.

In March 2017, the FASB issued ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." ASU 2017-07 requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. ASU 2017-07 also provides that only the service cost component is eligible for capitalization, when applicable. ASU 2017-07 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. ASU 2017-07 should be applied retrospectively for the income statement presentation of net periodic pension cost and net periodic postretirement benefit cost and prospectively, on or after the effective date, for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit cost. The Company expects that adoption of this standard will result in a reclassification of expense from cost of sales and selling, general and administrative expenses to other (income) of approximately \$25 million and \$17 million, respectively, for 2018 and \$70 million and \$41 million, respectively, for 2017.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment." ASU 2017-04 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. ASU 2017-04 also eliminates the requirement for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. ASU 2017-04 is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted. During the first quarter of 2018, the Company adopted ASU 2017-04. The adoption of ASU 2017-04 did not affect the Company's financial statements as there were no instances of a reporting unit's carrying value exceeding its fair value for any goodwill impairment tests performed during 2018.

In October 2016, the FASB issued ASU 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory." ASU 2016-16 provides that an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. Consequently, the amendments in ASU 2016-16 eliminate the exception for an intra-entity transfer of an asset other than inventory. ASU 2016-16 is effective for fiscal years, and interim periods within those years, beginning after December 31, 2017. Early adoption is permitted. The Company expects that the cumulative effect of the adoption of ASU 2016-16 will result in a reduction to retained earnings of approximately \$18 million.

In August 2016, the FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments." ASU 2016-15 provides specific guidance on several cash flow classification issues to reduce diversity in practice in how certain transactions are classified within the statement of cash flows. ASU 2016-15 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. After consideration of the current level of transactions within the scope of ASU 2016-15, the Company does not expect that the retrospective adoption of this standard at the beginning of the first quarter of 2019 will have a material impact on its financial statements.

In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments." ASU 2016-13 requires a financial asset (or a group of financial assets) measured at amortized cost to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. ASU 2016-13 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. The Company has not yet determined the effect that ASU 2016-13 will have on its financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases." ASU 2016-02 requires lessees to put most leases with terms greater than 12 months on their balance sheet by recognizing a liability to make lease payments and an asset representing their right to use the asset during the lease term. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election, by class of underlying asset, not to recognize the corresponding assets and lease liabilities. Lessee recognition, measurement, and presentation of expenses and cash flows will not change significantly from existing guidance and lessor accounting is largely unchanged. ASU 2016-02 also changes the definition of a lease and requires qualitative, and quantitative disclosures that provide information about the amount, timing, and uncertainty of cash flows arising from leases. ASU 2016-02 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. Adoption of this ASU is planned for the beginning of the first quarter of 2020. The Company has not yet determined the effect that ASU 2016-02 will have on its financial statements.

In January 2016, the FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Liabilities." ASU 2016-01 requires equity investments (excluding equity method investments and investments that are consolidated) to be measured at fair value with changes in fair value recognized in net income. Equity investments that do not have a readily determinable fair value may be measured at cost, adjusted for impairment and observable price changes. ASU 2016-01 also simplifies the impairment assessment of equity investments, eliminates the disclosure of the assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at cost on the balance sheet and requires the exit price to be used when measuring fair value of financial instruments for disclosure purposes. Under ASU 2016-01, changes in fair value (resulting from instrument-specific credit risk) will be presented separately in other comprehensive income for liabilities measured using the fair value option. Financial assets and liabilities will be presented separately by measurement category and type, either on the balance sheet or in the financial statement disclosures. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. The Company does not expect that the retrospective adoption of ASU 2016-01 at the beginning of the first quarter of 2019 will have a material impact on its financial statements.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers." ASU 2014-09 requires revenue recognition to depict the transfer of goods or services to customers in an amount that reflects the consideration that a company expects to be entitled to in exchange for the goods or services. To achieve this principle, a company must apply five steps including identifying the contract with a customer, identifying the performance obligations in the contract, determining the

transaction price, allocating the transaction price to the performance obligations, and recognizing revenue when (or as) the company satisfies the performance obligations. Additional quantitative and qualitative disclosure to enhance the understanding about the nature, amount, timing, and uncertainty of revenue and cash flows is also required. ASU 2014-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. In April 2016, the FASB issued ASU 2016-10, "Identifying Performance Obligations and Licensing." ASU 2016-10 clarifies the following two aspects of ASU 2014-09: identifying performance obligations and licensing implementation guidance. The effective date of ASU 2016-10 is the same as the effective date of ASU 2014-09. The Company has elected to adopt ASU 2014-09 using the modified retrospective method. The Company does not expect that the cumulative effect of the adoption of ASU 2014-09 at the beginning of the first quarter of 2019 will have a material impact on retained earnings. We expect to provide the required additional disclosures in periods subsequent to the adoption.

2. Acquisitions and Divestitures

Acquisitions - During 2017, the Company completed three acquisitions, including Clarcor, whose aggregate sales for their most recent fiscal year prior to acquisition were approximately \$1,522 million. Total purchase price for the three acquisitions was approximately \$4,227 million in cash and \$316 million in assumed debt.

During 2016, the Company completed two acquisitions whose aggregate sales for their most recent fiscal year prior to acquisition were approximately \$48 million. Total purchase price for the two acquisitions was approximately \$71 million in cash and \$2 million in assumed debt.

The results of operations for all acquisitions were included as of the respective dates of acquisition. Assets acquired and liabilities assumed were recognized at their respective fair values as of the acquisition date. The process of estimating the fair values of certain tangible assets, identifiable intangible assets and assumed liabilities requires the use of judgment in determining the appropriate assumptions and estimates. Revisions occur as valuations are finalized, additional information becomes available and as additional analysis is performed. All measurement period adjustments were completed within a year from the acquisition date, and such adjustments did not have a material impact on the Company's results of operations and financial position. The initial purchase price allocation for acquisitions in 2017 and 2016 are as follows:

	2017	2016
Assets:		
Accounts receivable	\$ 263,616	\$ 6,793
Inventories	302,422	12,041
Prepaid expenses	18,342	1,350
Deferred income taxes	4,658	_
Plant and equipment	376,826	5,647
Intangible and other assets	1,526,909	26,849
Goodwill	2,677,489	31,134
	5,170,262	83,814
Liabilities:		
Notes payable	20,162	720
Accounts payable, trade	84,753	2,536
Accrued payrolls and other compensation	45,942	1,310
Accrued domestic and foreign taxes	5,435	604
Other accrued liabilities	80,515	1,804
Long-term debt	296,240	1,743
Pensions and other postretirement benefits	33,929	_
Deferred income taxes	520,389	7,545
Other liabilities	11,878	_
Noncontrolling interests	1,822	
	1,101,065	16,262
Net assets acquired	\$ 4,069,197	\$ 67,552

Goodwill is calculated as the excess of the purchase price over the net assets acquired, primarily all of which is not deductible for tax purposes. With respect to the Clarcor acquisition, goodwill represents cost synergies and enhancements to the Company's existing filtration technologies.

The remaining disclosures in Note 2 pertain only to the Clarcor acquisition as the other two acquisitions completed during 2017 were immaterial.

Clarcor is a major manufacturer of filtration products under more than a dozen respected brands, including CLARCOR, Baldwin, Fuel Manager, PECOFacet, Airguard, Altair, BHA, Clearcurrent, Clark Filter, Hastings, United Air Specialists, Keddeg and Purolator. Clarcor had annual sales of approximately \$1,400 million for its fiscal 2016. For segment reporting purposes, Clarcor is part of the Diversified Industrial Segment.

The Company believes that Clarcor is a highly complementary acquisition that provides the Company with additional proprietary media, industrial and process filtration products and technologies, as well as a broad portfolio of replacement filters. The acquisition of Clarcor also offers significant expected operating synergies.

The Company's results of operations for 2017 include Clarcor's results of operations from the date of acquisition, February 28, 2017, through June 30, 2017. Net sales and segment operating (loss) attributable to Clarcor during this period was \$487,388 and \$(16,164), respectively.

The following unaudited pro forma information gives effect to the Company's acquisition of Clarcor as if the acquisition had occurred on July 1, 2015, and Clarcor had been included in the Company's results of operations for 2017 and 2016.

	 2017	 2016
Net sales	\$ 12,935,834	\$ 12,772,097
Net income attributable to common shareholders	1,027,693	748,634
Diluted earnings per share	7.58	5.47

The unaudited pro forma financial information in the table above includes adjustments related to amortization expense, depreciation, interest expense and transaction costs incurred as well as adjustments to cost of sales for the step-up in inventory to estimated acquisition-date fair value and related income tax effects and was based on a preliminary purchase price allocation using information available at that time. Transaction costs incurred (which are reflected in the selling, general and administrative expenses caption in the Consolidated Statement of Income) and the adjustment to cost of sales for the step-up in inventory to estimated acquisition-date fair value are considered to be non-recurring. Adjustments for non-recurring items increased pro forma net income attributable to common shareholders by \$108,078 for 2017 and decreased pro forma net income attributable to common shareholders by \$39,121 for 2016. The unaudited pro forma financial information does not give effect to any synergies, operating efficiencies or cost savings that may result or have resulted from the Clarcor acquisition.

Divestitures - During 2018, the Company divested its global Facet filtration business, which was part of the Diversified Industrial Segment. The operating results and net assets of the global Facet filtration business were immaterial to the Company's consolidated results of operations and financial position. The Company recorded a pre-tax loss in 2018 of approximately \$20 million and tax expense of approximately \$29 million resulting from a tax gain related to the divestiture. The pre-tax loss is reflected in the (gain) on disposal of assets caption in the Consolidated Statement of Income and the other expense caption in the Business Segment Information.

During 2017, the Company divested its Autoline product line, which was part of the Diversified Industrial Segment. The operating results and net assets of the Autoline product line were immaterial to the Company's consolidated results of operations and financial position. The Company recorded a net pre-tax gain in 2017 of approximately \$45 million related to the divestiture. The gain is reflected in the (gain) on disposal of assets caption in the Consolidated Statement of Income and the other expense caption in the Business Segment Information.

3. Charges Related to Business Realignment

The Company incurred business realignment charges in 2018, 2017 and 2016. The Company also incurred acquisition integration costs in 2018 and 2017 related to the 2017 acquisition of Clarcor.

Business realignment charges and acquisition integration costs presented in the Business Segment Information are as follows:

	2018	2017	2016
Diversified Industrial	\$ 78,558	\$ 52,939	\$ 91,404
Aerospace Systems	3,428	2,674	3,629
Corporate administration	_	_	2,215
Other expense	1,009	784	116

Work force reductions in connection with such business realignment charges and acquisition integration costs in the Business Segment Information are as follows:

	2018	2017	2016
Diversified Industrial	1,757	1,102	3,515
Aerospace Systems	265	89	81
Corporate administration	_	_	53

The business realignment charges primarily relate to actions taken under the Company's simplification initiative aimed at reducing organizational and process complexity. Business realignment charges and acquisition integration costs primarily consist of severance costs as well as plant closures, with the majority of charges incurred in Europe and North America. In connection with a plant closure during 2016, the Company recognized an expense associated with enhanced retirement benefits (refer to Note 10 for further discussion). The Company believes the realignment and acquisition integration actions taken will positively impact future results of operations but will not have a material effect on liquidity and sources and uses of capital.

The business realignment charges and acquisition integration costs are presented in the Consolidated Statement of Income as follows:

	 2018	2017	2016
Cost of sales	\$ 44,949	\$ 35,932	\$ 76,197
Selling, general and administrative expenses	36,813	19,681	21,051
(Gain) on disposal of assets	1,233	784	116

As of June 30, 2018, approximately \$40 million in severance payments have been made relating to business realignment and acquisition integration charges incurred during 2018, the remainder of which are expected to be paid by June 30, 2019. Severance payments relating to prior-year actions are being made as required. Remaining severance payments related to current-year and prior-year business realignment and acquisition integration actions of approximately \$26 million are primarily reflected within the other accrued liabilities caption in the Consolidated Balance Sheet. Additional charges may be recognized in future periods related to the business realignment and acquisition integration actions described above, the timing and amount of which are not known at this time.

4. Income Taxes

On December 22, 2017, the TCJ Act was enacted into law. The TCJ Act significantly reforms the Internal Revenue Code of 1986, as amended, by among other things, establishing a flat corporate income tax rate of 21 percent and creating a territorial tax system (with a one-time transition tax imposed on previously undistributed foreign earnings and profits).

The Securities and Exchange Commission staff issued SAB 118, which provides guidance on accounting for the tax effects of the TCJ Act. SAB 118 provides a measurement period that should not extend beyond one year from the TCJ Act's enactment date for companies to complete the applicable accounting under Topic 740. In accordance with SAB 118, and based on the information available as of June 30, 2018, the Company recorded a net provisional discrete income tax cost of \$233 million as a result of the TCJ Act being enacted.

The reduction in the U.S. corporate tax rate under the TCJ Act required a one-time revaluation of certain tax-related assets and liabilities to reflect their value at the reduced corporate tax rate of 21 percent, which resulted in a decrease in income tax expense of approximately \$80 million. The one-time transition tax on undistributed foreign earnings and profits resulted in an increase in income tax expense of \$297 million. Incremental adjustments have been made to these estimates during the three months ended June 30, 2018, based on the availability of additional information. The Company has not yet completed the accounting for the one-time transition tax and continues to analyze undistributed foreign earnings and profits for purposes of filing the tax return for 2018. In addition, the Company continues to interpret the law and guidance issued as of the date of these financial statements. On August 1, 2018, the U.S. Treasury and Internal Revenue Service released proposed regulations relating to the one-time transition tax. The proposed regulations are subject to a 60-day comment period. Final regulations are expected to be issued after consideration of the comments. The Company is currently evaluating the impact of the proposed regulations. The Company intends to make the election to pay the one-time transition tax over eight years. The amount of cash payments will be less than the amount of the income tax expense due to the utilization of available credits.

Certain provisions of the TCJ Act will impact the Company starting in 2019. These provisions include, but are not limited to, the creation of the base erosion anti-abuse tax, a general limitation of U.S. federal income taxes on dividends from foreign subsidiaries, a new provision designed to tax global intangible low-taxed income and the repeal of the domestic production activities deduction. The Company continues to evaluate the future impacts of these provisions and, as of June 30, 2018, has not recorded any impact of any of these future provisions.

Income before income taxes was derived from the following sources:

	2018	2017	2016
United States	\$ 963,843	\$ 722,925	\$ 672,907
Foreign	738,434	605,716	441,821
	\$ 1,702,277	\$ 1,328,641	\$ 1,114,728

Income taxes include the following:

	2018		2017	2016
Federal				
Current	\$ 453,821	\$ 132	2,420	\$ 235,557
Deferred	(23,876)	3′	7,316	(45,797)
Foreign				
Current	210,385	15'	7,518	113,146
Deferred	(17,454)	(:	5,319)	(7,006)
State and local				
Current	18,168	1′	7,835	24,495
Deferred	(82)	:	5,027	(12,883)
	\$ 640,962	\$ 344	4,797	\$ 307,512

A reconciliation of the Company's effective income tax rate to the statutory federal rate follows:

	2018	2017	2016
Statutory federal income tax rate	28.1%	35.0%	35.0%
State and local income taxes	1.2	1.7	0.6
Tax related to international activities	(1.0)	(5.5)	(5.2)
Transition tax related to the TCJ Act	17.5	_	_
Remeasurement of deferred tax assets and liabilities related to the TCJ Act	(4.8)	_	_
Cash surrender value of life insurance	(0.4)	(0.9)	0.2
Federal manufacturing deduction	(1.0)	(0.9)	(1.0)
Research tax credit	(0.7)	(0.8)	(1.9)
Share-based compensation	(2.2)	(2.7)	_
Other	1.0	0.1	(0.1)
Effective income tax rate	37.7%	26.0%	27.6%

Deferred income taxes are provided for the temporary differences between the financial reporting basis and the tax basis of assets and liabilities. The differences comprising the net deferred taxes shown on the Consolidated Balance Sheet at June 30 were as follows:

	 2018	2017
Retirement benefits	\$ 340,480	\$ 571,022
Other liabilities and reserves	112,935	144,885
Long-term contracts	17,496	61,375
Stock-based compensation	38,535	59,725
Loss carryforwards	679,880	678,486
Unrealized currency exchange gains and losses	27,228	22,212
Inventory	(9,612)	17,809
Foreign tax credit carryforward	_	23,050
Depreciation and amortization	(689,320)	(1,080,218)
Valuation allowance	(694,857)	(684,079)
Net deferred tax (liability)	\$ (177,235)	\$ (185,733)
Change in net deferred tax asset (liability):		
Provision for deferred tax	\$ 41,412	\$ (37,024)
Items of other comprehensive (loss)	(65,542)	(177,655)
Acquisitions and other	32,628	(521,814)
Total change in net deferred tax	\$ 8,498	\$ (736,493)

As of June 30, 2018, the Company recorded deferred tax assets of \$679,880 resulting from \$2,633,218 in loss carryforwards. A valuation allowance of \$675,045 related to the loss carryforwards has been established due to the uncertainty of their realization. Of this valuation allowance, \$640,239 relates to non-operating entities whose loss carryforward utilization is considered to be remote. Some of the loss carryforwards can be carried forward indefinitely; others can be carried forward from three to 20 years. In addition, a valuation allowance of \$19,812 related to future deductible items has been established due to the uncertainty of their realization. These future deductible items are recorded in the other liabilities and reserves line in the table above.

Historically, all foreign undistributed earnings were permanently reinvested in international operations. No tax was provided on such earnings as it was not practicable to estimate the additional tax that might be payable on the eventual distribution. The enactment of the TCJ Act created a territorial tax system significantly reducing the U.S. federal tax cost of future distributions. Although future distributions of foreign earnings to the U.S. should not be subject to U.S. federal income taxes, other U.S. or foreign taxes may be imposed on such earnings. The Company has analyzed existing factors and determined it will no longer permanently reinvest certain foreign earnings. On these undistributed foreign earnings of approximately \$274 million that are no longer permanently reinvested outside of the U.S., the Company has recorded a deferred tax liability of \$12 million. The remaining undistributed foreign earnings of approximately \$2,700 million remain permanently reinvested outside the U.S. at June 30, 2018. Of these undistributed earnings, we have recorded a deferred tax liability of \$4 million where certain foreign holding companies are not permanently reinvested in their subsidiaries. It is not practicable to estimate the additional taxes, including applicable foreign withholding taxes, that might be payable on the potential distribution of such permanently reinvested foreign earnings.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2018	 2017	2016
Balance July 1	\$ 147,506	\$ 139,907	\$ 145,688
Additions for tax positions related to current year	4,195	4,735	7,025
Additions for tax positions of prior years	8,333	2,618	2,582
Additions for acquisitions	_	3,939	_
Reductions for tax positions of prior years	(3,790)	(1,175)	(627)
Reductions for settlements	(315)	(3,020)	(10,284)
Reductions for expiration of statute of limitations	(4,480)	(2,792)	(4,142)
Effect of foreign currency translation	1,642	3,294	(335)
Balance June 30	\$ 153,091	\$ 147,506	\$ 139,907

The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate was \$153,091, \$95,460 and \$80,722 as of June 30, 2018, 2017 and 2016, respectively. If recognized, a significant portion of the gross unrecognized tax benefits as of June 30, 2017, and 2016, would have been offset against an asset that had been recorded in the Consolidated Balance Sheet. The accrued interest related to the gross unrecognized tax benefits, excluded from the amounts above, was \$21,737, \$15,432 and \$12,357 as of June 30, 2018, 2017 and 2016, respectively.

It is reasonably possible that, within the next 12 months, the amount of gross unrecognized tax benefits could be reduced by up to approximately \$120,000 as a result of the revaluation of existing uncertain tax positions arising from developments in the examination process or the closure of tax statutes. Any increase in the amount of unrecognized tax benefits within the next 12 months is expected to be insignificant.

The Company and its subsidiaries file income tax returns in the United States and in various foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world. The Company is open to assessment of its U.S. federal income tax returns by the Internal Revenue Service for years after 2011, and its state and local tax returns for years after 2011. The Company is open to assessment for significant foreign jurisdictions for years after 2009.

5. Earnings Per Share

Basic earnings per share are computed using the weighted-average number of common shares outstanding during the year. Diluted earnings per share are computed using the weighted-average number of common shares and common share equivalents outstanding during the year. Common share equivalents represent the dilutive effect of outstanding equity-based awards. The reconciliation of the numerator and denominator of basic and diluted earnings per share was as follows:

	2018			2017	2016
Numerator:					
Net income attributable to common shareholders	\$	1,060,801	\$	983,412	\$ 806,840
<u>Denominator:</u>					
Basic - weighted-average common shares		133,004,613		133,377,547	135,353,321
Increase in weighted-average common shares from dilutive effect of equity-based awards		2,422,221		2,182,217	1,558,369
Diluted - weighted-average common shares, assuming exercise of equity-based awards		135,426,834		135,559,764	136,911,690
Basic earnings per share	\$	7.98	\$	7.37	\$ 5.96
Diluted earnings per share	\$	7.83	\$	7.25	\$ 5.89

For 2018, 2017 and 2016, 0.5 million, 1.4 million and 3.1 million common shares, respectively, subject to equity-based awards were excluded from the computation of diluted earnings per share because the effect of their exercise would be anti-dilutive.

6. Inventories

The majority of domestic inventories are valued by the last-in, first-out (LIFO) cost method and the balance of the Company's inventories are valued by the first-in, first-out (FIFO) cost method. Inventories valued by the FIFO cost method are stated at the lower of cost or net realizable value. Inventories valued by the LIFO cost method are stated at lower of cost or market.

Inventories valued on the LIFO cost method were approximately 41 percent of total inventories in 2018 and 39 percent of total inventories in 2017. The current cost of these inventories exceeds their valuation determined on the LIFO basis by \$203,192 in 2018 and \$193,933 in 2017. Progress payments of \$25,026 in 2018 and \$44,231 in 2017 are netted against inventories.

The inventories caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	 2018	2017
Finished products	\$ 673,323	\$ 642,788
Work in process	765,835	723,133
Raw materials	182,146	183,573
Total	\$ 1,621,304	\$ 1,549,494

7. Goodwill and Intangible Assets

The changes in the carrying amount of goodwill are as follows:

	Diversified Industrial Segment	Aerospace ems Segment	Total
Balance June 30, 2016	\$ 2,804,403	\$ 98,634	\$ 2,903,037
Acquisitions	2,677,489		2,677,489
Divestitures	(22,618)	_	(22,618)
Foreign currency translation and other	28,962	8	28,970
Balance June 30, 2017	\$ 5,488,236	\$ 98,642	\$ 5,586,878
Acquisitions	37,489	_	37,489
Divestitures	(138,541)	_	(138,541)
Foreign currency translation and other	18,587	7	18,594
Balance June 30, 2018	\$ 5,405,771	\$ 98,649	\$ 5,504,420

Acquisitions represent the original goodwill allocation, purchase price adjustments and final adjustments to the purchase price allocation for the acquisitions during the measurement period subsequent to the applicable acquisition dates. The impact of the purchase price adjustments and final adjustments to the purchase price allocation on the Company's results of operations and financial position were immaterial. Divestitures primarily represent goodwill associated with the sale of a business in 2018 and a product line in 2017 (see Note 2 for further discussion).

The Company's annual impairment tests performed in 2018, 2017 and 2016 resulted in no impairment loss being recognized.

Intangible assets are amortized on a straight-line method over their legal or estimated useful lives. The gross carrying value and accumulated amortization for each major category of intangible asset at June 30 are as follows:

		2018				20		
	Gross Carrying Accumulated Gross Carryin Amount Amortization Amount				ross Carrying Amount		accumulated amortization	
Patents	\$	265,423	\$	117,440	\$	254,049	\$	100,860
Trademarks		546,905		227,580		553,691		200,413
Customer lists and other		2,482,079		933,867		2,566,983		765,966
Total	\$	3,294,407	\$	1,278,887	\$	3,374,723	\$	1,067,239

Total intangible asset amortization expense in 2018, 2017 and 2016 was \$221,494, \$145,128 and \$108,019, respectively. Estimated intangible asset amortization expense for the five years ending June 30, 2019 through 2023 is \$197,451, \$187,040, \$182,406, \$176,495 and \$168,961, respectively.

Intangible assets are evaluated for impairment whenever events or circumstances indicate that the undiscounted net cash flows to be generated by their use over their expected useful lives and eventual disposition may be less than their net carrying value. No such events or circumstances occurred in 2018, 2017 or 2016.

8. Financing Arrangements

The Company has a line of credit totaling \$2,000,000 through a multi-currency revolving credit agreement with a group of banks, of which \$1,466,200 was available at June 30, 2018. The credit agreement expires in October 2021; however, the Company has the right to request a one-year extension of the expiration date on an annual basis, which request may result in changes to the current terms and conditions of the credit agreement. Advances from the credit agreement can be used for general corporate purposes, including acquisitions, and for the refinancing of existing indebtedness. The credit agreement requires the payment of an annual facility fee, the amount of which may increase in the event the Company's credit ratings are lowered. Although a lowering of the Company's credit ratings would likely increase the cost of future debt, it would not limit the Company's ability to use the credit agreement nor would it accelerate the repayment of any outstanding borrowings.

The Company is currently authorized to sell up to \$2,000,000 of short-term commercial paper notes. Commercial paper notes outstanding at June 30, 2018 and 2017 were \$533,800 and \$534,200, respectively.

In addition to commercial paper notes, notes payable includes short-term lines of credit and borrowings from foreign banks. At June 30, 2018 and 2017, the Company had \$48,338 and \$62,946, respectively, in lines of credit from various foreign banks, none of which were outstanding at June 30, 2018 and 2017. Most of these agreements are renewed annually. The Company had borrowings from foreign banks of \$4,255 at June 30, 2018. The weighted-average interest rate on notes payable during 2018 and 2017 was 1.8 percent and 1.0 percent, respectively.

The Company's foreign locations in the ordinary course of business may enter into financial guarantees through financial institutions which enable customers to be reimbursed in the event of nonperformance by the Company.

The Company's credit agreements and indentures governing certain debt agreements contain various covenants, the violation of which would limit or preclude the use of the applicable agreements for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the applicable agreements. Based on the Company's rating level at June 30, 2018, the most restrictive financial covenant provides that the ratio of debt to debt-shareholders' equity cannot exceed 0.60 to 1.0. As of June 30, 2018, the Company's debt to debt-shareholders' equity ratio was 0.46 to 1.0. The Company is in compliance with all covenants.

9. Debt

June 30,	2018	2017
Domestic:		
Fixed rate medium-term notes, 3.30% to 6.55%, due 2019-2045	\$ 2,225,000	\$ 2,675,000
Senior Notes, 3.25% to 4.10%, due 2027 - 2047	1,300,000	1,300,000
Term loan, Libor plus 100 bps, due 2020	_	493,750
Foreign:		
Euro Senior Notes, 1.125%, due 2025	817,810	799,890
Euro Term loan, Libor plus 150 bps, due 2022	116,830	114,270
Other long-term debt	762	433
Deferred debt issuance costs	(41,432)	(47,183)
Total long-term debt	4,418,970	5,336,160
Less: Long-term debt payable within one year	100,411	474,265
Long-term debt, net	\$ 4,318,559	\$ 4,861,895

Principal amounts of long-term debt payable in the five years ending June 30, 2019 through 2023 are \$100,411, \$240, \$32, \$116,841 and \$300,006, respectively. The principal amounts of long-term debt payable exclude the impact of the amortization of debt issuance costs.

Lease Commitments - Future minimum rental commitments as of June 30, 2018, under non-cancelable operating leases, which expire at various dates, are as follows: 2019-\$78,812; 2020-\$56,889; 2021-\$35,102; 2022-\$18,326; 2023-\$9,172 and after 2023-\$28,390.

Rental expense in 2018, 2017 and 2016 was \$126,940, \$118,723 and \$119,004, respectively.

10. Retirement Benefits

Pensions - The Company has noncontributory defined benefit pension plans covering eligible employees, including certain employees in foreign countries. Plans for most salaried employees provide pay-related benefits based on years of service. Plans for hourly employees generally provide benefits based on flat-dollar amounts and years of service. The Company also has arrangements for certain key employees which provide for supplemental retirement benefits. In general, the Company's policy is to fund these plans based on legal requirements, tax considerations, local practices and investment opportunities. The Company also sponsors defined contribution plans and participates in government-sponsored programs in certain foreign countries.

A summary of the Company's defined benefit pension plans follows:

	2018	2017	2016
Benefit cost			
Service cost	\$ 82,993	\$ 94,356	\$ 94,650
Interest cost	144,339	126,131	181,469
Special termination cost	_	_	7,088
Settlement cost	_	_	5,102
Expected return on plan assets	(258,490)	(239,537)	(221,629)
Amortization of prior service cost	6,570	8,116	7,470
Amortization of unrecognized actuarial loss	147,387	212,433	170,407
Amortization of initial net obligation	18	18	17
Net periodic benefit cost	\$ 122,817	\$ 201,517	\$ 244,574

	 2018	 2017
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 5,217,857	\$ 5,315,655
Service cost	82,993	94,356
Interest cost	144,339	126,131
Acquisition	_	201,283
Plan amendments	2,932	3,265
Divestiture	(9,535)	(851)
Actuarial gain	(182,588)	(268,370)
Benefits paid	(216,169)	(250,289)
Foreign currency translation and other	(5,832)	(3,323)
Benefit obligation at end of year	\$ 5,033,997	\$ 5,217,857
Change in plan assets		
Fair value of plan assets at beginning of year	\$ 3,896,001	\$ 3,307,047
Actual gain on plan assets	174,951	341,344
Acquisition	_	168,264
Divestiture	(12,231)	_
Employer contributions	81,518	330,932
Benefits paid	(216,169)	(250,289)
Foreign currency translation and other	(8,181)	(1,297)
Fair value of plan assets at end of year	\$ 3,915,889	\$ 3,896,001
Funded status	\$ (1,118,108)	\$ (1,321,856)
Amounts recognized on the Consolidated Balance Sheet		
Other accrued liabilities	\$ (11,333)	\$ (12,793)
Pensions and other postretirement benefits	 (1,106,775)	(1,309,063)
Net amount recognized	\$ (1,118,108)	\$ (1,321,856)
Amounts recognized in Accumulated Other Comprehensive (Loss)		
Net actuarial loss	\$ 1,216,612	\$ 1,461,017
Prior service cost	18,900	22,761
Transition obligation	61	77
Net amount recognized	\$ 1,235,573	\$ 1,483,855

The presentation of the amounts recognized on the Consolidated Balance Sheet and in accumulated other comprehensive (loss) is on a debit (credit) basis and excludes the effect of income taxes.

Beginning in 2017, the Company changed the method used to estimate the service and interest cost components of net periodic pension and other postretirement benefit costs from the single-weighted average discount rate to the spot yield curve approach. The change does not affect the measurement of the Company's benefit obligations. The new method provides a more precise measure of these components by improving the correlation between projected benefit cash flows and the discrete spot yield curve rates and is accounted for as a change in estimate prospectively. As a result of the method change, net pension benefit cost for 2017 is lower than the net pension benefit cost for 2016 by \$29,777.

During 2016, the Company provided enhanced retirement benefits in connection with a plant closure, which resulted in an increase in net pension benefit cost of \$7,088.

The estimated amount of net actuarial loss, prior service cost and transition obligation that will be amortized from accumulated other comprehensive (loss) into net periodic benefit pension cost in 2019 is \$114,825, \$6,286 and \$18, respectively.

The accumulated benefit obligation for all defined benefit plans was \$4,751,111 and \$4,890,058 at June 30, 2018 and 2017, respectively. The projected benefit obligation, accumulated benefit obligation and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets were \$4,933,863, \$4,665,272 and \$3,807,859, respectively, at June 30, 2018, and \$5,120,268, \$4,805,485 and \$3,793,696, respectively, at June 30, 2017. The projected benefit obligation and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets were \$4,970,120 and \$3,842,539, respectively, at June 30, 2018, and \$5,142,881 and \$3,815,815, respectively, at June 30, 2017.

The Company expects to make cash contributions of approximately \$70 million to its defined benefit pension plans in 2019, the majority of which relate to its non-U.S. defined benefit plans. Estimated future benefit payments in the five years ending June 30, 2019 through 2023 are \$240,163, \$242,051, \$259,402, \$305,553 and \$267,258, respectively and \$1,454,646 in the aggregate for the five years ending June 30, 2024 through June 30, 2028.

The assumptions used to measure net periodic benefit cost for the Company's significant defined benefit plans are:

	2018	2017	2016
U.S. defined benefit plans			
Discount rate	3.64%	3.33%	4.19%
Average increase in compensation	3.89%	5.02%	5.14%
Expected return on plan assets	7.5%	7.5%	7.5%
Non-U.S. defined benefit plans			
Discount rate	0.30 to 7.57%	0.23 to 7.75%	0.7 to 6.0%
Average increase in compensation	2.0 to 5.5%	2.0 to 5.5%	2.0 to 5.5%
Expected return on plan assets	1.0 to 5.75%	1.0 to 5.75%	1.0 to 5.75%

The assumptions used to measure the benefit obligation for the Company's significant defined benefit plans are:

	2018	2017
U.S. defined benefit plans		
Discount rate	4.01%	3.64%
Average increase in compensation	3.65%	3.89%
Non-U.S. defined benefit plans		
Discount rate	0.30 to 3.37%	0.30 to 7.57%
Average increase in compensation	1.75 to 5.5%	2.0 to 5.5%

The discount rate assumption is based on current rates of high-quality, long-term corporate bonds over the same estimated time period that benefit payments will be required to be made. The expected return on plan assets assumption is based on the weighted-average expected return of the various asset classes in the plans' portfolio. The asset class return is developed using historical asset return performance as well as current market conditions such as inflation, interest rates and equity market performance.

The weighted-average allocation of the majority of the assets related to defined benefit plans is as follows:

	2018	2017
Equity securities	44%	45%
Debt securities	49%	47%
Other investments	7%	8%
	100%	100%

The weighted-average target asset allocation as of June 30, 2018 is 41 percent equity securities, 47 percent debt securities and 12 percent other investments. The investment strategy for the Company's worldwide defined benefit pension plan assets focuses on achieving prudent actuarial funding ratios while maintaining acceptable levels of risk in order to provide adequate liquidity to meet immediate and future benefit requirements. This strategy requires investment portfolios that are broadly diversified across various asset classes and external investment managers. Assets held in the U.S. defined benefit plans account for approximately 74 percent of the Company's total defined benefit plan assets. The Company's overall investment strategy with respect to the Company's U.S. defined benefit plans is to opportunistically migrate from its traditional mix between growth seeking assets (primarily consisting of global public equities in developed and emerging countries and hedge fund of fund strategies) and income generating assets (primarily consisting of high quality bonds, both domestic and global, emerging market bonds, high yield bonds and Treasury Inflation Protected Securities) to an allocation more heavily weighted toward income generating assets. Over time, long duration fixed income assets are being added to the portfolio. These securities are highly correlated with the Company's pension liabilities and will serve to hedge a portion of the Company's interest rate risk.

The fair values of pension plan assets at June 30, 2018 and at June 30, 2017, by asset class, are as follows:

	Ju	nne 30, 2018	oted Prices In etive Markets (Level 1)	Significant Other Observable Inputs (Level 2)	,	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	\$	57,307	\$ 54,322	\$ 2,985	\$	_
Equity securities						
U.S. based companies		447,553	447,553	_		_
Non-U.S. based companies		243,253	243,253	_		_
Fixed income securities						
Corporate bonds		225,929	115,534	110,395		_
Government issued securities		272,604	184,636	87,968		_
Mutual funds						
Equity funds		176,846	176,846	_		_
Fixed income funds		179,562	179,562	_		
Mutual funds measured at net asset value		232,050				
Common/Collective trusts						
Equity funds		89,578	89,578	_		_
Fixed income funds		46,620	46,620	_		_
Common/Collective trusts measured at net asset value		1,737,543				
Limited Partnerships measured at net asset value		243,536				
Miscellaneous		(36,492)	_	(36,492)		_
Total at June 30, 2018	\$	3,915,889	\$ 1,537,904	\$ 164,856	\$	

	June 30, 2017	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	\$ 76,057	\$ 75,370	\$ 687	\$ —
Equity securities				
U.S. based companies	416,830	416,830	_	_
Non-U.S. based companies	236,134	236,134	_	
Fixed income securities				
Corporate bonds	176,135	91,982	84,153	_
Government issued securities	199,389	144,616	54,773	_
Mutual funds				
Equity funds	306,168	306,168	_	_
Fixed income funds	204,628	204,628	_	_
Mutual funds measured at net asset value	233,234			
Common/Collective trusts				
Equity funds	70,389	70,389	_	_
Fixed income funds	46,003	46,003	_	_
Common/Collective trusts measured at net asset value	1,677,942			
Limited Partnerships measured at net asset value	262,092			
Miscellaneous	(9,000)		(9,000)	_
Total at June 30, 2017	\$ 3,896,001	\$ 1,592,120	\$ 130,613	\$

Cash and cash equivalents, which include repurchase agreements and other short-term investments, are valued at cost, which approximates fair value.

Equity securities are valued at the closing price reported on the active market on which the individual securities are traded. U.S. based companies include Company stock with a fair value of \$207,202 and \$212,480 as of June 30, 2018 and 2017, respectively.

Fixed income securities are valued using both market observable inputs for similar assets that are traded on an active market and the closing price on the active market on which the individual securities are traded.

Mutual funds are valued using the closing market price reported on the active market on which the fund is traded or at net asset value per share and primarily consist of equity and fixed income funds. The equity funds primarily provide exposure to U.S. and international equities, real estate and commodities. The fixed income funds primarily provide exposure to high-yield securities and emerging market fixed income instruments. Mutual funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the Consolidated Balance Sheet.

Common/Collective trusts primarily consist of equity and fixed income funds and are valued using the closing market price reported on the active market on which the fund is traded or at net asset value per share. Common/Collective trust investments can be redeemed without restriction after giving appropriate notice to the issuer. Generally, redemption of the entire investment balance requires a 60-day notice period. The equity funds provide exposure to large, mid and small cap U.S. equities, international large and small cap equities and emerging market equities. The fixed income funds provide exposure to U.S., international and emerging market debt securities. Common/Collective trusts measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the Consolidated Balance Sheet.

Limited Partnerships primarily consist of hedge funds valued using a net asset value per share and provide exposure to a variety of hedging strategies including long/short equity, relative value, event driven and global macro. Limited Partnership investments can be redeemed either monthly or quarterly and without restriction after giving appropriate notice to the issuer. Redemption of the entire investment balance generally requires no more than a 95-day notice period. Limited Partnerships measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the Consolidated Balance Sheet.

Miscellaneous primarily includes real estate funds, insurance contracts held in the asset portfolio of the Company's non-U.S. defined benefit pension plans, and net payables for securities purchased but not settled in the asset portfolio of the Company's U.S. defined benefit pension plans. Insurance contracts are valued at the present value of future cash flows promised under the terms of the insurance contracts.

The primary investment objective of equity securities and equity funds, within both the mutual fund and common/collective trust asset class, is to obtain capital appreciation in an amount that at least equals various market-based benchmarks. The primary investment objective of fixed income securities and fixed income funds, within both the mutual fund and common/collective trust asset class, is to provide for a constant stream of income while preserving capital. The primary investment objective of limited partnerships is to achieve capital appreciation through an investment program focused on specialized investment strategies. The primary investment objective of insurance contracts, included in the miscellaneous asset class, is to provide a stable rate of return over a specified period of time.

Employee Savings Plan - The Company sponsors an employee stock ownership plan (ESOP) as part of its existing savings and investment 401(k) plan. The ESOP is available to eligible domestic employees. Company matching contributions, up to a maximum of four percent of an employee's annual compensation, are recorded as compensation expense. Participants may direct company matching contributions to any investment option within the savings and investment 401(k) plan.

	2018	2017	2016
Shares held by ESOP	6,476,154	6,911,436	7,728,332
Company matching contributions	\$ 65,262	\$ 57,766	\$ 58,922

In addition to shares within the ESOP, as of June 30, 2018, employees have elected to invest in 1,870,286 shares of common stock within a company stock fund of the savings and investment 401(k) plan.

The Company has a retirement income account (RIA) within the employee savings plan. The Company makes a cash contribution to the participant's RIA each year, the amount of which is based on the participant's age and years of service. Participants do not contribute to the RIA. The Company recognized \$29,023, \$29,309 and \$25,780 in expense related to the RIA in 2018, 2017 and 2016, respectively.

During 2017, the Company assumed various defined contribution plans previously sponsored by Clarcor. The Company recognized expense of \$4,481 and \$2,199 in 2018 and 2017, respectively, related to these defined contribution plans. In January 2018, the former employees of Clarcor became eligible to participate in the savings and investment 401(k) plan.

Other Postretirement Benefits - The Company provides postretirement medical and life insurance benefits to certain retirees and eligible dependents. Most plans are contributory, with retiree contributions adjusted annually. The plans are unfunded and pay stated percentages of covered medically necessary expenses incurred by retirees, after subtracting payments by Medicare or other providers and after stated deductibles have been met. For most plans, the Company has established cost maximums to more effectively control future medical costs. The Company has reserved the right to change these benefit plans.

The Company recognized \$2,755, \$4,357 and \$8,754 in expense related to other postretirement benefits in 2018, 2017 and 2016, respectively. During 2016, the Company provided enhanced retirement benefits in connection with a plant closure, which resulted in an increase in expense related to other postretirement benefits of \$4,521.

		2018		2017
Change in benefit obligation				
Benefit obligation at beginning of year	\$	79,933	\$	89,785
Service cost		320		469
Interest cost		2,003		1,922
Acquisition		_		291
Actuarial gain		(11,259)		(8,235)
Benefits paid		(4,476)		(4,299)
Benefit obligation at end of year	\$	66,521	\$	79,933
Funded status	\$	(66,521)	\$	(79,933)
Amounts recognized on the Consolidated Balance Sheet				
Other accrued liabilities	\$	(6,180)	\$	(6,532)
Pensions and other postretirement benefits		(60,341)		(73,401)
Net amount recognized	\$	(66,521)	\$	(79,933)
Amounts recognized in Accumulated Other Comprehensive (Loss)				
Net actuarial loss	\$	1,232	\$	12,828
Prior service credit	_	(314)		(435)
Net amount recognized	\$	918	\$	12,393
			$\overline{}$	

The presentation of the amounts recognized on the Consolidated Balance Sheet and in accumulated other comprehensive (loss) is on a debit (credit) basis and is before the effect of income taxes. The amount of net actuarial loss and prior service credit that will be amortized from accumulated other comprehensive (loss) into net periodic postretirement cost in 2019 is \$14 and \$(121), respectively.

The assumptions used to measure the net periodic benefit cost for postretirement benefit obligations are:

	2018	2017	2016
Discount rate	3.46%	3.15%	3.96%
Current medical cost trend rate (Pre-65 participants)	8.19%	7.35%	7.61%
Current medical cost trend rate (Post-65 participants)	9.79%	8.68%	9.00%
Ultimate medical cost trend rate	4.50%	4.50%	4.50%
Medical cost trend rate decreases to ultimate in year	2025	2025	2025

The discount rate assumption used to measure the benefit obligation was 3.92 percent in 2018 and 3.46 percent in 2017.

Estimated future benefit payments for other postretirement benefits in the five years ending June 30, 2019 through 2023 are \$6,463, \$6,358, \$5,967, \$5,804 and \$5,564, respectively, and \$24,842 in the aggregate for the five years ending June 30, 2024 through June 30, 2028.

A one percentage point change in assumed health care cost trend rates would not have a material effect on the benefit cost or benefit obligation.

Other - The Company has established nonqualified deferred compensation programs, which permit officers, directors and certain management employees annually to elect to defer a portion of their compensation, on a pre-tax basis, until their retirement. The retirement benefit to be provided is based on the amount of compensation deferred, Company matching contributions and earnings on the deferrals. In addition, the Company maintains a defined contribution nonqualified supplemental executive pension plan in which the Company is the only contributor. During 2018, 2017 and 2016, the Company recorded expense (income) relating to these programs of \$13,420, \$20,400 and \$(2,917), respectively.

The Company has invested in corporate-owned life insurance policies to assist in meeting the obligation under these programs. The policies are held in a rabbi trust and are recorded as assets of the Company.

11. Equity

Changes in accumulated other comprehensive (loss) in shareholders' equity by component:

	reign Currency Translation ljustment and Other	Retirement Benefit Plans	Total
Balance June 30, 2016	\$ (844,121)	\$ (1,383,644)	\$ (2,227,765)
Other comprehensive income (loss) before reclassifications	(80,189)	242,414	162,225
Amounts reclassified from accumulated other comprehensive (loss)	(1,032)	142,368	141,336
Balance June 30, 2017	\$ (925,342)	\$ (998,862)	\$ (1,924,204)
Other comprehensive income (loss) before reclassifications	(10,141)	76,417	66,276
Amounts reclassified from accumulated other comprehensive (loss)	(7,994)	102,836	94,842
Balance June 30, 2018	\$ (943,477)	\$ (819,609)	\$ (1,763,086)

Significant reclassifications out of accumulated other comprehensive (loss) in shareholders' equity during 2018:

from .	Accumulated Other	Consolidated Statement of Income Classification
\$	(6,467)	See Note 10
	(147,611)	See Note 10
	(154,078)	
	51,242	Income taxes
\$	(102,836)	
	from A Com	(147,611) (154,078) 51,242

Significant reclassifications out of accumulated other comprehensive (loss) in shareholders' equity during 2017:

from	Accumulated Other	Consolidated Statement of Income Classification
\$	(8,014)	See Note 10
	(214,284)	See Note 10
	(222,298)	
	79,930	Income taxes
\$	(142,368)	
	from Con	(214,284) (222,298) 79,930

Share Repurchases - The Company has a program to repurchase its common shares. On October 22, 2014, the Board of Directors of the Company approved an increase in the overall number of shares authorized to repurchase under the program so that, beginning on such date, the aggregate number of shares authorized for repurchase was 35 million. There is no limitation on the number of shares that can be repurchased in a year. Repurchases may be funded primarily from operating cash flows and commercial paper borrowings and the shares are initially held as treasury shares. The number of common shares repurchased at the average purchase price follows:

	2018	2017	2016
Shares repurchased	1,738,234	1,976,778	5,121,051
Average price per share including commissions	\$ 172.59	\$ 133.90	\$ 108.87

12. Stock Incentive Plans

The Company's 2016 Omnibus Stock Incentive Plan provides for the granting of share-based incentive awards in the form of nonqualified stock options, stock appreciation rights (SARs), restricted stock units (RSUs) and restricted and unrestricted stock to officers and key employees of the Company. The aggregate number of shares authorized for issuance under the 2016 Omnibus Stock Incentive Plan is 16 million. At June 30, 2018, 11.6 million common shares were available for future issuance.

The Company satisfies share-based incentive award obligations by issuing shares of common stock out of treasury, which have been repurchased pursuant to the Company's share repurchase program described in Note 11, or through the issuance of previously unissued common stock.

SARs - Upon exercise, SARs entitle the participant to receive shares of common stock equal to the increase in value of the award between the grant date and the exercise date. SARs are exercisable from one to three years after the date of grant and expire no more than 10 years after grant.

The fair value of each SAR award granted in 2018, 2017 and 2016 was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	2018		2017	 2016
Risk-free interest rate	1.9%	0	1.4%	1.9%
Expected life of award	5.2 years		5.3 years	5.4 years
Expected dividend yield of stock	2.0%	o O	2.0%	1.9%
Expected volatility of stock	23.4%	o O	28.5%	28.7%
Weighted-average fair value	\$ 29.71	\$	27.39	\$ 26.88

The risk-free interest rate was based on U.S. Treasury yields with a term similar to the expected life of the award. The expected life of the award was derived by referring to actual exercise and post-vesting employment termination experience. The expected dividend yield was based on the Company's historical dividend rate and stock price over a period similar to the expected life of the award. The expected volatility of stock was derived by referring to changes in the Company's historical common stock prices over a time-frame similar to the expected life of the award.

SAR activity during 2018 is as follows (aggregate intrinsic value in millions):

	Number of Shares	Weighted- Average Exercise Price		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Average Exercise		Weighted- Average Remaining Contractual Term	gregate nsic Value
Outstanding June 30, 2017	6,533,406	\$	94.18																				
Granted	907,626	\$	158.79																				
Exercised	(1,351,120)	\$	78.61																				
Canceled	(43,031)	\$	146.84																				
Outstanding June 30, 2018	6,046,881	\$	106.98	5.8 years	\$ 298.1																		
Exercisable June 30, 2018	4,168,672	\$	92.74	4.6 years	\$ 263.1																		

A summary of the status and changes of shares subject to SAR awards and the related average price per share follows:

	Number of Shares	Avera	ighted- ge Grant air Value
Nonvested June 30, 2017	1,947,569	\$	27.80
Granted	907,626	\$	29.71
Vested	(933,955)	\$	28.33
Canceled	(43,031)	\$	28.34
Nonvested June 30, 2018	1,878,209	\$	28.44

At June 30, 2018, \$13,458 of expense with respect to nonvested SAR awards has yet to be recognized and will be amortized into expense over a weighted-average period of approximately 17 months. The total fair value of shares vested during 2018, 2017 and 2016 was \$26,461, \$33,094 and \$34,706, respectively.

Information related to SAR awards exercised during 2018, 2017 and 2016 is as follows:

	2018	2017	2016
Net cash proceeds	\$ 3,682	\$ 2,202	\$ 126
Intrinsic value	136,000	153,908	40,612
Income tax benefit	28,701	31,193	7,188

During 2018, 2017 and 2016, the Company recognized stock-based compensation expense of \$27,422, \$28,535 and \$28,129, respectively, relating to SAR awards. The Company derives a tax deduction measured by the excess of the market value over the grant price at the date stock-based awards are exercised. The related income tax benefit was credited to income tax expense in 2018 and 2017 and to additional capital in 2016.

Shares surrendered upon exercise of SARs: 2018 - 269,670; 2017 - 371,246; 2016 - 158,808.

RSUs - RSUs constitute an agreement to deliver shares of common stock to the participant at the end of a vesting period. Generally, the RSUs granted to employees vest and the underlying stock is issued ratably over a three-year graded vesting period. Nonvested RSUs may not be transferred and do not have dividend or voting rights. For each nonvested RSU, recipients are entitled to receive a dividend equivalent, payable in cash or common shares, equal to the cash dividend per share paid to common shareholders.

The fair value of each RSU award granted in 2018, 2017 and 2016 was based on the fair market value of the Company's common stock on the date of grant. A summary of the status and changes of shares subject to RSU awards for employees and the related average price per share follows:

	Number of Shares	ighted-Average rant Date Fair Value
Nonvested June 30, 2017	394,329	\$ 120.92
Granted	157,086	\$ 159.26
Vested	(176,855)	\$ 116.94
Canceled	(13,949)	\$ 139.61
Nonvested June 30, 2018	360,611	\$ 138.85

During 2018, 2017 and 2016, the Company recognized stock-based compensation expense of \$24,073, \$23,025 and \$21,190 respectively, relating to RSU awards for employees. At June 30, 2018, \$18,627 of expense with respect to nonvested RSU awards has yet to be recognized and will be amortized into expense over a weighted-average period of approximately 21 months. The total fair value of RSU awards vested during 2018, 2017 and 2016 was \$20,681, \$21,576 and \$21,173, respectively. The Company recognized an income tax benefit of \$2,451, \$939 and \$870 relating to the issuance of common stock for RSU awards that vested during 2018, 2017 and 2016, respectively.

During 2018, 2017 and 2016, 9,900, 12,430 and 14,404 RSU awards, respectively, with a one-year vesting period were granted to non-employee members of the Board of Directors. Although nonvested shares do not have dividend or voting rights, recipients receive a dividend equivalent payable in common shares, equal to the cash dividend per share paid to common shareholders. In 2018, 2017 and 2016, the Company recognized stock-based compensation expense of \$1,697, \$1,560, and \$824, respectively, relating to these awards. At June 30, 2018, \$596 of expense with respect to 9,845 nonvested RSU awards granted to the Board of Directors has yet to be recognized and will be amortized into expense over a weighted-average period of approximately four months. During 2018 and 2017, the Company recognized an income tax benefit of \$270 and \$105, respectively, related to the vesting of 12,639 and 13,740 RSU awards, respectively, issued to the Board of Directors.

LTIP - The Company's Long Term Incentive Plans (LTIP) provide for the issuance of unrestricted stock to certain officers and key employees based on the attainment of certain goals relating to the Company's revenue growth, earnings per share growth and return on invested capital during the three-year performance period. No dividends or dividend equivalents are paid on unearned shares.

Stock issued for LTIP		2018	 2017	2016
LTIP three-year plan	20	15-16-17	2014-15-16	2013-14-15
Number of shares issued		308,278	227,707	175,291
Share value on date of issuance	\$	176.39	\$ 157.07	\$ 113.91
Total value	\$	54,377	\$ 35,766	\$ 19,967

Under the Company's 2016-17-18 LTIP, a payout of unrestricted stock will be issued in April 2019.

The fair value of each LTIP award granted in 2018, 2017 and 2016 was based on the fair market value of the Company's common stock on the date of grant. A summary of the status and changes of shares relating to the LTIP and the related average price per share follows:

	Number of Shares	Ave	Veighted- crage Grant e Fair Value
Nonvested June 30, 2017	734,744	\$	119.56
Granted	191,986	\$	206.99
Vested	(256,071)	\$	122.11
Canceled	(12,388)	\$	128.63
Nonvested June 30, 2018	658,271	\$	143.90

During 2018, 2017 and 2016, the Company recorded stock-based compensation expense of \$65,640, \$27,219 and \$21,150, respectively, relating to the LTIP. During 2018, 2017 and 2016, the Company recognized an income tax benefit of \$3,893, \$1,701 and \$3,119, respectively, relating to the LTIP.

Shares surrendered in connection with the LTIP: 2018 - 139,918; 2017 - 113,074; 2016 - 78,173.

Restricted Shares - Prior to 2016, the Company issued restricted shares to non-employee members of the Board of Directors. The fair value of the restricted shares was based on the fair market value of the Company's common stock on the date of grant. During 2016, the Company recognized expense of \$468 and tax cost of \$(32) related to restricted shares.

13. Research and Development

Research and development costs amounted to \$327,877 in 2018, \$336,675 in 2017 and \$359,796 in 2016. These amounts include both costs incurred by the Company related to independent research and development initiatives as well as costs incurred in connection with research and development contracts. Costs incurred in connection with research and development contracts amounted to \$40,823 in 2018, \$65,292 in 2017 and \$57,999 in 2016. These costs are included in the total research and development cost for each of the respective years.

14. Financial Instruments

The Company's financial instruments consist primarily of cash and cash equivalents, marketable securities and other investments, accounts receivable and long-term investments as well as obligations under accounts payable, trade, notes payable and long-term debt. Due to their short-term nature, the carrying values for cash and cash equivalents, accounts receivable, accounts payable, trade and notes payable approximate fair value.

Marketable securities and other investments include deposits, which are recorded at cost, and investments classified as available-for-sale, which are recorded at fair value with unrealized gains and losses recorded in accumulated other comprehensive (loss). Gross unrealized gains and losses were not material as of June 30, 2018 and 2017. There were no facts or circumstances that indicated the unrealized losses were other than temporary.

The contractual maturities of available-for-sale investments were predominantly one to three years at June 30, 2018 and 2017. Actual maturities of available-for-sale investments may differ from their contractual maturities as the Company has the ability to liquidate the available-for-sale investments after giving appropriate notice to the issuer.

The carrying value of long-term debt and estimated fair value of long-term debt at June 30 are as follows:

		2018	2017
Carrying value of long-term debt	\$ 4	1,460,402	\$ 5,383,343
Estimated fair value of long-term debt	4	1,548,796	5,645,529

The fair value of long-term debt was determined based on observable market prices in the active market in which the security is traded and is classified within level 2 of the fair value hierarchy.

The Company utilizes derivative and non-derivative financial instruments, including forward exchange contracts, costless collar contracts, cross-currency swap contracts and certain foreign denominated debt designated as net investment hedges, to manage foreign currency transaction and translation risk. The derivative financial instrument contracts are with major investment grade financial institutions and the Company does not anticipate any material non-performance by any of the counterparties. The Company does not hold or issue derivative financial instruments for trading purposes.

The Company's €700 million aggregate principal amount of Senior Notes due 2025 have been designated as a hedge of the Company's net investment in certain foreign subsidiaries. The translation of the Senior Notes due 2025 into U.S. dollars is recorded in accumulated other comprehensive (loss) and remains there until the underlying net investment is sold or substantially liquidated.

Derivative financial instruments are recognized on the Consolidated Balance Sheet as either assets or liabilities and are measured at fair value.

The location and fair value of derivative financial instruments reported in the Consolidated Balance Sheet are as follows:

	Balance Sheet Caption	2018	2017
Net investment hedges			
Cross-currency swap contracts	Other assets	\$ 7,614	\$ 15,135
Cash flow hedges			
Costless collar contracts	Non-trade and notes receivable	932	430
Costless collar contracts	Other accrued liabilities	236	2,027

The cross-currency swap and costless collar contracts are reflected on a gross basis in the Consolidated Balance Sheet. The Company has not entered into any master netting arrangements.

Gains or losses on derivatives that are not hedges are adjusted to fair value through the cost of sales caption in the Consolidated Statement of Income. Gains or losses on derivatives that are hedges are adjusted to fair value through accumulated other comprehensive (loss) in the Consolidated Balance Sheet until the hedged item is recognized in earnings.

The cross-currency swap contracts have been designated as hedging instruments. The costless collar contracts have not been designated as hedging instruments and are considered to be economic hedges of forecasted transactions.

Gains or losses on derivative financial instruments that were recorded in the Consolidated Statement of Income during 2018, 2017 and 2016 were not material.

(Losses) on derivative and non-derivative financial instruments that were recorded in accumulated other comprehensive (loss) in the Consolidated Balance Sheet are as follows:

	2018	2017
Cross-currency swap contracts	\$ (9,209)	\$ (6,003)
Foreign denominated debt	(9,543)	(16,175)

There was no ineffectiveness of the cross-currency swap contracts or foreign denominated debt, nor were any portion of these financial instruments excluded from the effectiveness testing during 2018, 2017 and 2016.

A summary of financial assets and liabilities that were measured at fair value on a recurring basis at June 30, 2018 and 2017 are as follows:

		June 30, 2018	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
Assets:						
Equity securities	\$	2,956	\$ 2,956	\$ —	\$ —	
Corporate bonds		5,331	5,331	_	_	
Asset-backed and mortgage-backed securities		3,911	_	3,911		
Derivatives		14,110	_	14,110	_	
Investments measured at net asset value		7,208				
Liabilities:						
Derivatives		5,315	_	5,315		

	June 30, 2017	I	oted Prices In Active Markets Level 1)	gnificant Other Observable Inputs (Level 2)	Significant Unobservabl Inputs (Level 3)	
Assets:						
Equity securities	\$ 3,008	\$	3,008	\$ 	\$	_
Corporate bonds	5,968		5,968	_		—
Asset-backed and mortgage-backed securities	4,762		_	4,762		_
Derivatives	16,496		_	16,496		—
Investments measured at net asset value	7,073					
Liabilities:						
Derivatives	16,064		_	16,064		_

The fair values of the equity securities, corporate bonds and asset-backed and mortgage-backed securities are determined using the closing market price reported in the active market in which the fund is traded or the market price for similar assets that are traded in an active market.

Derivatives consist of forward exchange, costless collar and cross-currency swap contracts, the fair values of which are calculated using market observable inputs including both spot and forward prices for the same underlying currencies. The calculation of fair value of the cross-currency swap contracts also utilizes a present value cash flow model that has been adjusted to reflect the credit risk of either the Company or the counterparty.

Investments measured at net asset value primarily consist of investments in fixed income mutual funds, which are measured at fair value using the net asset value per share practical expedient. These investments have not been categorized in the fair value hierarchy. The Company has the ability to liquidate these investments after giving appropriate notice to the issuer.

The primary investment objective for all investments is the preservation of principal and liquidity while earning income.

There are no other financial assets or financial liabilities that are marked to market on a recurring basis. Fair values are transferred between levels of the fair value hierarchy when facts and circumstances indicate that a change in the method of estimating the fair value of a financial asset or financial liability is warranted.

15. Contingencies

The Company is involved in various litigation matters arising in the normal course of business, including proceedings based on product liability claims, workers' compensation claims and alleged violations of various environmental laws. The Company is self-insured in the United States for health care, workers' compensation, general liability and product liability up to predetermined amounts, above which third party insurance applies. Management regularly reviews the probable outcome of these proceedings, the expenses expected to be incurred, the availability and limits of the insurance coverage and the established accruals for liabilities. While the outcome of pending proceedings cannot be predicted with certainty, management believes that any liabilities that may result from these proceedings will not have a material adverse effect on the Company's liquidity, financial condition or results of operations.

Environmental - The Company is currently responsible for environmental remediation at various manufacturing facilities presently or formerly operated by the Company and has been named as a "potentially responsible party," along with other companies, at off-site waste disposal facilities and regional sites.

As of June 30, 2018, the Company had an accrual of \$18,024 for environmental matters, which are probable and reasonably estimable. The accrual is recorded based upon the best estimate of costs to be incurred in light of the progress made in determining the magnitude of remediation costs, the timing and extent of remedial actions required by governmental authorities and the amount of the Company's liability in proportion to other responsible parties.

The Company's estimated total liability for environmental matters ranges from a minimum of \$18.0 million to a maximum of \$81.0 million. The largest range for any one site is approximately \$9.5 million. The actual costs to be incurred by the Company will be dependent on final determination of contamination and required remedial action, negotiations with governmental authorities with respect to cleanup levels, changes in regulatory requirements, innovations in investigatory and remedial technologies, effectiveness of remedial technologies employed, the ability of other responsible parties to pay, and any insurance or other third-party recoveries.

16. Quarterly Information (Unaudited)

2018	1st	2nd	3rd	4th	Total
Net sales	\$ 3,364,651	\$ 3,370,673	\$ 3,749,591	\$ 3,817,477	\$ 14,302,392
Net income attributable to common shareholders	285,397	56,159	365,989	353,256	1,060,801
Diluted earnings per share	2.10	0.41	2.70	2.62	7.83
2017	1st	2nd	3rd	4th	Total
2017 Net sales	\$ 1st 2,743,131	\$ 2nd 2,670,804	\$ 3rd 3,119,139	\$ 4th 3,496,238	\$ Total 12,029,312
	\$ 	\$ 	\$ 	\$ 	\$

Earnings per share amounts are computed independently for each of the quarters presented, therefore, the sum of the quarterly earnings per share amounts may not equal the total computed for the year.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure. None.

ITEM 9A. Controls and Procedures. The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's principal executive officer and principal financial officer, of the effectiveness of the Company's disclosure controls and procedures as of June 30, 2018. Based on this evaluation, the Company's principal executive officer and principal financial officer concluded that, as of June 30, 2018, the Company's disclosure controls and procedures were effective.

There was no change in the Company's internal control over financial reporting during the quarter ended June 30, 2018 that materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Report On Internal Control Over Financial Reporting

Our management, including the principal executive officer and the principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)). We assessed the effectiveness of our internal control over financial reporting as of June 30, 2018. In making this assessment, we used the criteria established by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control-Integrated Framework (2013)." We concluded that based on our assessment, the Company's internal control over financial reporting was effective as of June 30, 2018.

Deloitte & Touche LLP, the independent registered public accounting firm that audited the Company's consolidated financial statements, has issued an attestation report on the Company's internal control over financial reporting as of June 30, 2018, which is included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 9B. Other Information. None.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance. Information required with respect to the Directors of the Company is set forth under the caption "Item I – Election of Directors" in the definitive Proxy Statement for the Company's 2018 Annual Meeting of Shareholders, to be held October 24, 2018 (the "2018 Proxy Statement"), and is incorporated herein by reference. Information with respect to the executive officers of the Company is included in Part I, Item 1C of this Annual Report on Form 10-K under the caption "Executive Officers of the Registrant."

The information set forth under the caption "Other Governance Matters - Section 16(a) Beneficial Ownership Reporting Compliance" in the 2018 Proxy Statement is incorporated herein by reference.

The Company has adopted a Global Code of Business Conduct that applies to its Chief Executive Officer, Chief Financial Officer and Controller. The Global Code of Business Conduct is posted on the Company's investor relations internet website at www.phstock.com under the Corporate Governance page. Any amendment to, or waiver from, a provision of the Company's Global Code of Business Conduct that applies to its Chief Executive Officer, Chief Financial Officer or Controller will also be posted at www.phstock.com under the Corporate Governance page.

The information set forth under the captions "Committees of Our Board of Directors - The Audit Committee" and "Report of the Audit Committee" in the 2018 Proxy Statement is incorporated herein by reference.

<u>ITEM 11.</u> <u>Executive Compensation.</u> The information set forth under the captions "Compensation Discussion and Analysis," "Compensation Committee Report," and "Compensation Tables" in the 2018 Proxy Statement is incorporated herein by reference.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters. The information set forth under the captions "Principal Shareholders" in the 2018 Proxy Statement is incorporated herein by reference.

<u>Equity Compensation Plan Information</u>. The following table sets forth certain information regarding the Company's equity compensation plans as of June 30, 2018, unless otherwise indicated.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under Equity compensation plans		
Equity compensation plans approved by security holders	7,754,599 ⁽¹⁾	\$108.89	21,597,846 ⁽²⁾		
Equity compensation plans not approved by security holders	_	_	_		
Total	7,754,599	\$108.89	21,597,846		

⁽¹⁾Includes the maximum future payouts of common stock that may be issued under the calendar year 2016-17-18, 2017-18-19 and 2018-19-20 long term incentive performance awards (LTIP awards). For these LTIP awards, payouts will be determined based on our achieving an average return on average equity of 4% or an average free cash flow margin of 4%. If these performance measures are achieved, the participants will be eligible to receive the maximum payout of 200%. The Human Resources and Compensation Committee will then compare our performance to that of a group of our peers and, if appropriate, apply its discretion to reduce the final payouts based on any performance measures that the Committee determines to be appropriate.

<u>ITEM 13.</u> <u>Certain Relationships and Related Transactions, and Director Independence.</u> The information set forth under the captions "Other Governance Matters - Review and Approval of Transactions with Related Persons" and "Corporate Governance: Board of Directors - Director Independence" in the 2018 Proxy Statement is incorporated herein by reference.

<u>ITEM 14. Principal Accountant Fees and Services.</u> The information set forth under the captions "Audit Fees," "Audit-Related Fees," "Tax Fees," "All Other Fees" and "Audit Committee Pre-Approval Policies and Procedures" in the 2018 Proxy Statement is incorporated herein by reference.

⁽²⁾The maximum number of shares of our common stock that may be issued under the 2016 Omnibus Stock Incentive Plan is 16 million shares, of which approximately 11.6 million shares are available for future issuance. The maximum number of shares that may be issued under the Global Employee Stock Purchase Plan is 10 million shares, of which approximately 9.9 million shares are still available for future issuance.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules.

a. The following are filed as part of this report:

		in Form 10-K
1. Financial S	<u>tatements</u>	
Consolidat	ted Statement of Income	32
	ted Statement of Comprehensive Income	33
Business S	Segment Information	34
	ted Balance Sheet	36
Consolidat	ted Statement of Cash Flows	37
	ted Statement of Equity	38
Notes to C	Consolidated Financial Statements	39
2. <u>Schedule</u>		
II - Valuati	ion and Qualifying Accounts	73
3. Exhibits		
Exhibit No.	Description of Exhibit	
(2)(a)	Agreement and Plan of Merger among Parker-Hannifin Corporation, CLARCOR, In Corporation dated as of December 1, 2016, incorporated by reference to Exhibit 2.1 8-K filed with the SEC on December 1, 2016 (Commission File No. 1-4982). +	
	Articles of Incorporation and By-Laws:	
(3)(a)	Amended Articles of Incorporation, incorporated by reference to Exhibit 3(a) to Reform 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).	gistrant's Report on
(3)(b)	Code of Regulations, as amended, incorporated by reference to Exhibit 3(b) to Regi Form 10-Q for the quarterly period ended September 30, 2016 (Commission File N	istrant's Report on o. 1-4982).
	Instruments Defining Rights of Security Holders:	
(4)(a)	Registration Rights Agreement, dated February 24, 2017, among Registrant and McLLC and Citigroup Global Markets Inc., as Representatives of the Initial Purchasers reference to Exhibit 4.1 of Registrant's Current Report on Form 8-K filed with the S 2017 (Commission File No. 1-4982).	s, incorporated by
(4)(b)	Registration Rights Agreement, dated February 24, 2017, among Registrant and the defined therein), incorporated by reference to Exhibit 4.2 of Registrant's Current Refiled with the SEC on February 28, 2017 (Commission File No. 1-4982).	
	The Registrant is a party to other instruments, copies of which will be furnished to request, defining the rights of holders of its long-term debt identified in Note 9 of the Consolidated Financial Statements included within Part II, Item 8 of this Annual Registrant Part II, Item 8	ne Notes to
	Material Contracts:	
(10)(a)	Form of Parker-Hannifin Corporation Amended and Restated Change in Control Se entered into by Registrant and its executive officers, incorporated by reference to E. Registrant's Report on Form 10-Q for the quarterly period ended September 30, 200 No. 1-4982).	xhibit 10(a) to
(10)(b)	Form of Parker-Hannifin Corporation Change in Control Severance Agreement for elected after September 1, 2015 at or above Grade 29, incorporated by reference to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commis	Exhibit 10(c) to

- (10)(c) Form of Parker-Hannifin Corporation Change in Control Severance Agreement for Executive Officers dated after September 1, 2015 below Grade 29, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(d) Parker-Hannifin Corporation Amended and Restated Change in Control Severance Plan, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(e) Form of Indemnification Agreement entered into by the Registrant and its directors and executive officers, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2003 (Commission File No. 1-4982).
- (10)(f) Description of the Parker-Hannifin Corporation Officer Life Insurance Plan, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2005 (Commission File No. 1-4982).
- (10)(g) Parker-Hannifin Corporation Amended and Restated Supplemental Executive Retirement Benefits Program, effective July 1, 2014, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2016 (Commission File No. 1-4982).
- (10)(h) Parker-Hannifin Corporation Amended and Restated Defined Contribution Supplemental Executive Retirement Program, effective January 22, 2015, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(i) Summary of the Parker-Hannifin Corporation Executive Disability Insurance Plan, incorporated by reference to Exhibit 10(j) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(j) Parker-Hannifin Corporation Amended and Restated 2003 Stock Incentive Plan, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(k) Parker-Hannifin Corporation Amended and Restated 2009 Omnibus Stock Incentive Plan, incorporated by reference to Appendix A to Registrant's Definitive Proxy Statement filed with the Commission on September 24, 2012 (Commission File No. 1-4982).
- (10)(1) Parker-Hannifin Corporation 2016 Omnibus Stock Incentive Plan, incorporated by reference to Annex B to Registrant's Definitive Proxy Statement on Schedule 14A, filed with the SEC on September 26, 2016 (Commission File No. 1-4982).
- (10)(m) Parker-Hannifin Corporation First Amendment to 2016 Omnibus Stock Incentive Plan, effective April 1, 2017, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2017 (Commission File No. 1-4982).
- (10)(n) Parker-Hannifin Corporation 2010 Performance Bonus Plan, incorporated by reference to Annex A to Registrant's Definitive Proxy Statement filed with the Commission on September 27, 2010 (Commission File No. 1-4982).
- (10)(o) Parker-Hannifin Corporation 2015 Performance Bonus Plan incorporated by reference to Appendix B to Registrant's Definitive Proxy Statement filed with the Commission on September 28, 2015 (Commission File No. 1-4982).
- (10)(p) Form of 2007 Notice of Grant of Stock Options with Tandem Stock Appreciation Rights for executive officers, incorporated by reference to Exhibit 10.3 to Registrant's Report on Form 8-K filed with the SEC on August 22, 2006 (Commission File No. 1-4982).
- (10)(q) Form of 2008 Notice of Grant of Stock Options with Tandem Stock Appreciation Rights for executive officers, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K/A filed with the SEC on September 5, 2007 (Commission File No. 1-4982).
- (10)(r) Form of 2009 Notice of Stock Options Award with Tandem Stock Appreciation Rights for Executive Officers, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(s) Form of 2010 Notice of Stock Options with Tandem Stock Appreciation Rights for Executive Officers, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2009 (Commission File No. 1-4982).

- (10)(t) Form of 2011 Parker-Hannifin Corporation Stock Appreciation Rights Award Agreement for executive officers, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the SEC on August 17, 2010 (Commission File No. 1-4982).
- (10)(u) 2011 Parker-Hannifin Corporation Stock Appreciation Rights Terms and Conditions for executive officers, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K filed with the SEC on August 17, 2010 (Commission File No. 1-4982).
- (10)(v) Form of Parker-Hannifin Corporation Stock Appreciation Rights Award Agreement for executive officers, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2011 (Commission File No. 1-4982).
- (10)(w) Parker-Hannifin Corporation Stock Appreciation Rights Terms and Conditions for executive officers, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2011 (Commission File No. 1-4982).
- (10)(x) Parker-Hannifin Corporation Target Incentive Plan, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(y) Parker-Hannifin Corporation Target Incentive Plan Subject to Performance Bonus Plan, incorporated by reference to Exhibit 10(e) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(z) Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2013 (Commission File No. 1-4982).
- (10)(aa) Form of Parker-Hannifin Corporation Long-Term Incentive Performance (LTIP) Award Under the Performance Bonus Plan, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the Commission on February 1, 2011 (Commission File No. 1-4982).
- (10)(bb) Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan, as amended and restated, effective January 20, 2016, incorporated by reference to Exhibit 10(aa) to Registrant's Annual Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission file No. 1-4982).
- (10)(cc) Form of Notice of Award under the Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan, as amended and restated, incorporated by reference to Exhibit 10(bb) to the Registrant's Annual Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission file No. 1-4982).
- (10)(dd) Parker-Hannifin Corporation Restricted Stock Unit Award Agreement dated August 17, 2016 for Lee C. Banks, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(ee) Parker-Hannifin Corporation Restricted Stock Unit Terms and Conditions for Lee C. Banks, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(ff) Parker-Hannifin Corporation Profitable Growth Incentive Plan, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(gg) Form of Notice of RONA Bonus Award Under the Parker-Hannifin Corporation Performance Bonus Plan, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2009 (Commission File No. 1-4982).
- (10)(hh) Parker-Hannifin Corporation RONA Plan Subject to Performance Bonus Plan, incorporated by reference to Exhibit 10(f) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(ii) Parker-Hannifin Corporation Summary of RONA Bonus Awards in Lieu of Certain Executive Perquisites, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(jj) Parker-Hannifin Corporation amended and restated Savings Restoration Plan, as of September 1, 2004, incorporated by reference to Exhibit 10(t) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2004 (Commission File No. 1-4982).

- (10)(kk) Parker-Hannifin Corporation Amended and Restated Savings Restoration Plan, effective January 1, 2016, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2016 (Commission File No. 1-4982).
- (10)(ll) Parker-Hannifin Corporation Amended and Restated Pension Restoration Plan, effective July 1, 2016, incorporated by reference to Exhibit 10(mm) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(mm) Parker-Hannifin Corporation amended and restated Executive Deferral Plan, as of September 1, 2004, incorporated by reference to Exhibit 10(v) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2004 (Commission File No. 1-4982).
- (10)(nn) Parker-Hannifin Corporation Amended and Restated Executive Deferral Plan, effective September 2, 2015, incorporated by reference to Exhibit 10(pp) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(00) Parker-Hannifin Corporation Global Employee Stock Purchase Plan, incorporated by reference to Appendix A to Registrant's Definitive Proxy Statement filed with the SEC on September 22, 2014 (Commission File No. 1-4982).
- (10)(pp) Parker-Hannifin Corporation Claw-back Policy, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the SEC on August 18, 2009 (Commission File No. 1-4982).
- (10)(qq) Parker-Hannifin Corporation Amended and Restated 2004 Non-Employee Directors' Stock Incentive Plan, incorporated by reference to Exhibit 10(aa) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2009 (Commission File No. 1-4982).
- (10)(rr) Form of Parker-Hannifin Corporation Non-Employee Directors' Restricted Stock Unit Award Agreement, incorporated by reference to Exhibit 10(g) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(ss) Parker-Hannifin Corporation Non-Employee Directors' Restricted Stock Unit Award Terms and Conditions, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(tt) Amended and Restated Deferred Compensation Plan for Directors of Parker-Hannifin Corporation, effective January 22, 2015, incorporated by reference to Exhibit 10(i) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(uu) Summary of the Compensation of the Non-Employee Members of the Board of Directors, effective October 26, 2016, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2016 (Commission File No. 1-4982).
- (12) Computation of Ratio of Earnings to Fixed Charges as of June 30, 2018.*
- (21) List of subsidiaries of Registrant.*
- (23) Consent of Independent Registered Public Accounting Firm.*
- (24) Power of Attorney.*
- (31)(a) Certification of the Principal Executive Officer Pursuant to 17 CFR 240.13a-14(a), as Adopted Pursuant to §302 of the Sarbanes-Oxley Act of 2002.*
- (31)(b) Certification of the Principal Financial Officer Pursuant to 17 CFR 240.13a-14(a), as Adopted Pursuant to \$302 of the Sarbanes-Oxley Act of 2002.*
- (32) Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to §906 of the Sarbanes-Oxley Act of 2002.*
- 101.INS XBRL Instance Document.*
- 101.SCH XBRL Taxonomy Extension Schema Document.*
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.*
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document.*
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document.*
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.*

- + Certain schedules have been omitted and the Company agrees to furnish supplementally to the Commission a copy of any omitted exhibits and schedules upon request.
- * Submitted electronically herewith.

Attached as Exhibit 101 to this Annual Report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statement of Income for the years ended June 30, 2018, 2017 and 2016, (ii) Consolidated Statement of Comprehensive Income for the years ended June 30, 2018, 2017 and 2016, (iii) Consolidated Balance Sheet at June 30, 2018 and 2017, (iv) Consolidated Statement of Cash Flows for the years ended June 30, 2018, 2017 and 2016, (v) Consolidated Statement of Equity for the years ended June 30, 2018, 2017 and 2016, and (vi) Notes to Consolidated Financial Statements.

Shareholders may request a copy of any of the exhibits to this Annual Report on Form 10-K by writing to the Secretary, Parker-Hannifin Corporation, 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141.

Individual financial statements and related applicable schedules for the Registrant (separately) have been omitted because the Registrant is primarily an operating company and its subsidiaries are considered to be wholly-owned.

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.

PARKER-HANNIFIN CORPORATION

By: /s/ Catherine A. Suever

Catherine A. Suever

Executive Vice President - Finance & Administration and Chief Financial Officer

August 24, 2018

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

Signature and Title

THOMAS L. WILLIAMS, Chairman of the Board of Directors and Principal Executive Officer; TODD M. LEOMBRUNO, Principal Accounting Officer; LEE C. BANKS, Director; ROBERT G. BOHN, Director; LINDA S. HARTY, Director; ROBERT J. KOHLHEPP, Director; KEVIN A. LOBO, Director; KLAUS-PETER MÜLLER, Director; CANDY M. OBOURN, Director; JOSEPH SCAMINACE, Director; WOLFGANG R. SCHMITT, Director; ÅKE SVENSSON, Director; JAMES R. VERRIER, Director; and JAMES L. WAINSCOTT, Director.

Date: August 24, 2018

/s/ Catherine A. Suever

Catherine A. Suever, Executive Vice President – Finance & Administration and Chief Financial Officer (Principal Financial Officer and Attorney-in-Fact)

PARKER-HANNIFIN CORPORATION

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS FOR THE YEARS ENDED June 30, 2016, 2017 and 2018 (Dollars in Thousands)

Column A	Column B		Column C		Column D		Column E		
Description	j	Balance at Beginning Of Period		Additions Charged to Costs and Expenses		Other (Deductions)/ Additions (A)		Balance At End Of Period	
Allowance for doubtful accounts:									
Year ended June 30, 2016	\$	9,284	\$	1,419	\$	(2,693)	\$	8,010	
Year ended June 30, 2017	\$	8,010	\$	3,559	\$	2,767	\$	14,336	
Year ended June 30, 2018	\$	14,336	\$	2,861	\$	(7,525)	\$	9,672	
Deferred tax asset valuation allowance:									
Year ended June 30, 2016	\$	330,006	\$	2,702	\$	_	\$	332,708	
Year ended June 30, 2017	\$	332,708	\$	349,803	\$	1,568	\$	684,079	
Year ended June 30, 2018	\$	684,079	\$	10,778	\$	_	\$	694,857	

⁽A) For allowance for doubtful accounts, net balance is comprised of deductions due to divestitures or uncollectible accounts charged off, additions due to acquisitions or recoveries, and currency translation adjustments. For deferred tax asset valuation allowance, the balance primarily represents adjustments due to acquisitions.

CERTIFICATIONS

I, Thomas L. Williams, certify that:

- 1. I have reviewed this annual report on Form 10-K of Parker-Hannifin Corporation;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
- 4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
- 5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: August 24, 2018

/s/ Thomas L. Williams

Thomas L. Williams

Chief Executive Officer

CERTIFICATIONS

I, Catherine A. Suever, certify that:

- 1. I have reviewed this annual report on Form 10-K of Parker-Hannifin Corporation;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
- 4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
- 5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: August 24, 2018

/s/ Catherine A. Suever

Catherine A. Suever

Executive Vice President – Finance &

Administration and Chief Financial Officer

Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to § 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Annual Report on Form 10-K of Parker-Hannifin Corporation (the "Company") for the fiscal year ended June 30, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: August 24, 2018

/s/ Thomas L. Williams

Name: Thomas L. Williams
Title: Chief Executive Officer

/s/ Catherine A. Suever

Name: Catherine A. Suever

Title: Executive Vice President-Finance & Administration and Chief Financial Officer

"Conditions such as we have successfully encountered and waded through during the existence of this business, are an inspiration... let everyone look forward to greater responsibilities and actively enter into our group activities and contribute their share to the success thereof."

- Art Parker on the importance of culture, 1934

With Appreciation

Executive Management



Robert W. Bond

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Robert W. Bond after 40 years of dedicated service. As Vice President and President - Fluid Connectors Group for more than a decade, he successfully led the group to achieve record-setting growth and financial performance. More recently, Mr. Bond was responsible for expanding Parker's global service offering and establishing a foundation for the company's Internet of Things initiatives. He is noted for his transformational leadership and for the lasting impact his contributions have left on Parker and those around him.



Michael Chung

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Michael Chung, Vice President - eBusiness, IoT and Services, after 32 years of dedicated service. Mr. Chung made significant contributions as Vice President and President - Automation Group, with responsibility for the global development, manufacturing and marketing of pneumatic and electromechanical technologies. He also led the Asia Pacific Group during a period of considerable growth and development. Mr. Chung will be remembered for his positive outlook and for building and transforming our Asia Pacific business.

Board of Directors - As of October 24, 2018



Robert J. Kohlhepp

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Robert J. Kohlhepp, retired President of Xamass Partners LLC and Chairman and Chief Executive Officer of Cintas Corporation, who served on Parker Hannifin's Board of Directors for 16 years. Mr. Kohlhepp leveraged his extensive experience leading a global industrial company to provide expert guidance to Parker in driving shareholder value.



Klaus-Peter Müller

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Klaus-Peter Müller, retired Chairman of the Supervisory Board of Commerzbank AG, who served on Parker Hannifin's Board of Directors for 20 years. Mr. Müller made a meaningful impact in maximizing the value Parker delivers to shareholders by applying decades of service in senior financial leadership positions.



Wolfgang R. Schmitt

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Wolfgang R. Schmitt, retired Chief Executive Officer of Trends 2 Innovation and Rubbermaid, who served on Parker Hannifin's Board of Directors representing shareholders for 26 years. Mr. Schmitt provided Parker valuable leadership and strategic insights through his experience as a strategic growth consultant, helping to drive Parker shareholder value for nearly three decades.

#1 Motion & Control Company









Product Groups

Motion Systems Aerospace Fluid Connectors

Key Markets

Agriculture

Construction Distribution

General machinery

Machine tool

Marine

Material handling

Military

Mining

Oil & gas

Power generation

Semiconductor

Transportation

Truck & bus

Turf

Key Products

Accumulators

Air preparation (FRL) & dryers

Cartridge valves

Clusters

Controllers & human machine

interfaces (HMI)

Coolers

Cylinders

Drive controlled pumps

Drives (AC/DC Servo)

Electric actuators & positioners

Electric motors & gearheads

Electrohydraulic actuators

Electrohydraulic pumps

Electronic displays & HMI

Fan drives

Gerotor pumps & motors

Grippers

Helical actuators

Integrated hydrostatic transmissions

Industrial valves

IO link controllers

Joysticks

Mobile valves

Piston pumps & motors

Pneumatic cylinders

Pneumatic valves

Power take-offs

Rotary actuators

Screw pumps

Sensors

Software

Vane pumps & motors

Key Markets

Aftermarket services Commercial transports

Engines

General & business aviation

Helicopters

Military aircraft

Missiles

Power generation

Regional transports

Unmanned aerial vehicles

Key Products

Control actuation systems & components

Engine systems & components

Fluid conveyance systems & components

Fluid metering, delivery & atomization

devices

Fuel systems & components

Fuel tank inerting systems

Hydraulic systems & components

Lubrication components

Pneumatic control components

Power conditioning & management

systems

Thermal management

Wheels & brakes

Key Markets

Aerial lift

Agriculture

Bulk chemical handling

Construction

Food & beverage

Fuel & gas delivery

Industrial machinery

Life sciences

Marine

Mining

Mobile

Oil & gas

Renewable energy

Transportation

Key Products

Check valves

Diagnostic equipment

Hose couplings

Industrial hose

Low pressure fittings & adapters

Polytetrafluoroethylene (PTFE)

hose & tubing

Quick couplings

Rubber & thermoplastic hose

Tube fittings & adapters

Tubing & plastic fittings







Instrumentation

Filtration

Engineered Materials

Key Markets

Air conditioning

Alternative fuels Analytical

Chemical

Diesel engine

E 101

Food & beverage

Industrial machinery

Life sciences

Microelectronics

Oil & gas

Packaging

Refining

Refrigeration

Transportation

Key Products

Accumulators

Analytical instruments & sample conditioning systems

Compressed natural gas dispensers

Cryogenic valves

Electronic valves

Emissions

Filter driers

Fluid system & control fittings, meters, valves, regulators & manifold valves

Fluoropolymer chemical delivery fittings, valves & pumps

High-pressure fittings, valves, pumps & systems

High-purity gas delivery fittings, valves & regulators

Miniature valves & pumps

Natural gas on-board fuel systems

Pressure regulating valves

Refrigeration & air conditioning electronic controls & monitoring

Solenoid valves

Key Markets

Agriculture

Aerospace & defense

Construction

Food & beverage

Heating, ventilation & air conditioning

(HVAC)

Industrial machinery

Life sciences

Marine

Mining

Oil & gas

Power generation

Renewable energy

Transportation

Transportation

Water purification

Key Products

Aerospace filters & systems

Air pollution control & dust collection systems & filters

Compressed air & gas treatment solutions

Engine fuel, oil, air & closed crankcase ventilation filtration systems

Filtration & purification systems

Fluid condition monitoring systems

Gas turbine air inlet filters

HVAC filters

Hydraulic & lubrication filters & systems Industrial & analytical gas generators

Instrumentation filters

Membrane, fiber & sintered metal filters

Natural gas filters

Process liquid, air & gas filters

Sterile air filters

Water purification filters & systems

Key Markets

Aerospace

Chemical processing

Consumer

Fluid power

General industrial

Information technology

Life sciences

Microelectronics

Military

Oil & gas

Power generation

Renewable energy

Telecommunications

Transportation

Key Products

Dynamic seals

Elastomeric o-rings

Electro-medical instrument design

& assembly

Electromagnetic interference shielding

Extruded & precision-cut fabricated

elastomeric seals

High-temperature metal seals

Homogeneous & inserted

elastomeric shapes

Medical device fabrication & assembly

Metal & plastic retained composite

seals

Shielded optical windows

Silicone tubing & extrusions

Thermal management

Vibration dampening

BOARD OF DIRECTORS

THOMAS L. WILLIAMS

Chairman and Chief Executive Officer Parker-Hannifin Corporation

LEE C. BANKS

President and Chief Operating Officer Parker-Hannifin Corporation

ROBERT G. BOHN

Former Chairman and Chief Executive Officer Oshkosh Corporation (specialty vehicles)

LINDA S. HARTY

Former Treasurer Medtronic plc (medical technology)

ROBERT J. KOHLHEPP*

Former Chairman Cintas Corporation (uniform rental)

KEVIN A. LOBO

Chairman, Chief Executive Officer and President Stryker Corporation (medical technologies)

KLAUS-PETER MÜLLER*

Chairman of the Supervisory Board Commerzbank AG (international banking)

CANDY M. OBOURN

Chairman

Isoflux Incorporated (coatings technologies)

JOSEPH SCAMINACE

Former Chairman and Chief Executive Officer OM Group, Inc. (metal-based specialty chemicals)

WOLFGANG R. SCHMITT*

Former Chief Executive Officer Trends 2 Innovation (strategic growth consultants)

ÅKE SVENSSON

Chairman

Swedavia AB (transport infrastructure)

JAMES R. VERRIER

Former President, Chief Executive Officer and Director

BorgWarner Inc. (powertrain solutions)

JAMES L. WAINSCOTT

Former Chairman, Chief Executive Officer and President

AK Steel Holding Corporation (steel producer)

* Retired from the Board of Directors as of October 24, 2018.

EXECUTIVE MANAGEMENT

THOMAS L. WILLIAMS

Chairman and Chief Executive Officer

LEE C. BANKS

President and Chief Operating Officer

CATHERINE A. SUEVER

Executive Vice President - Finance & Administration and Chief Financial Officer

MARK J. HART

Executive Vice President - Human Resources and External Affairs

WILLIAM "SKIP" BOWMAN

Vice President and President -Instrumentation Group

ROBIN J. DAVENPORT

Vice President - Corporate Finance

WILLIAM G. ELINE

Vice President - Chief Information Officer

THOMAS C. GENTILE

Vice President - Global Supply Chain

JOACHIM GUHE

President - Europe, Middle East and Africa (EMEA) Group

KURT A. KELLER

Vice President

TODD M. LEOMBRUNO

Vice President and Controller

JOSEPH R. LEONTI

Vice President, General Counsel and Secretary

CANDIDO LIMA

President - Latin America Group

ROBERT W. MALONE

Vice President and President - Filtration Group

M. CRAIG MAXWELL

Vice President - Chief Technology and Innovation Officer

MICHAEL J. O'HARA

Vice President - Global Sales and Marketing

JENNIFER A. PARMENTIER

Vice President and President -Engineered Materials Group

ANDREW D. ROSS

Vice President and President -Fluid Connectors Group

ROGER S. SHERRARD

Vice President and President -Aerospace Group

MICHAEL WEE

President - Asia Pacific Group

ANDREW M. WEEKS

Vice President and President -Motion Systems Group

INVESTOR INFORMATION

ANNUAL MEETING

The 2018 Annual Meeting of Shareholders will be held on Wednesday, October 24, 2018, at Parker-Hannifin Global Headquarters, 6035 Parkland Blvd., Cleveland, Ohio 44124-4141, at 9:00 a.m. EDT.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche, LLP, Cleveland, Ohio

TRANSFER AGENT & REGISTRAR

Equiniti Trust Company EQ Shareowner Services P.O. Box 64854 St. Paul, Minnesota 55164-0854 Telephone 800 468 9716 www.shareowneronline.com

STOCK INFORMATION

New York Stock Exchange Ticker symbol: PH www.phstock.com

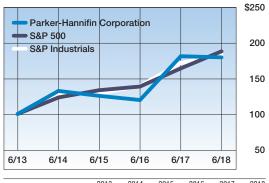
PARKER CORPORATE HEADQUARTERS

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Comparison of 5-Year Cumulative Total Return* Among Parker-Hannifin Corporation, the S&P 500 Index and the S&P Industrials Index



	2013	2014	2015	2016	2017	2018
Parker-Hannifin Corporation	100.00	133.96	126.37	120.22	181.16	179.50
S&P 500	100.00	124.61	133.86	139.20	164.11	187.70
S&P Industrials	100.00	128.58	131.62	140.89	172.26	181.46

^{*\$100} invested on 6/30/13 in stock or index, including reinvestment of dividends. Fiscal year ending June 30.

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