UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the Fiscal Year Ended December 31, 2017

Commission File Number 0-7087

Astronics Corporation

(Exact Name of Registrant as Specified in its Charter)

New York	**16-0959303**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

130 Commerce Way, East Aurora, N.Y. 14052
(Address of principal executive office)

Registrant's telephone number, including area code (716) 805-1599

Securities registered pursuant to Section 12(b) of the Act: None

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

$.01 par value Common Stock; $.01 par value Class B Stock
(Title of Class)

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of "large accelerated filer", an "accelerated filer", a "non-accelerated filer" and a "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller Reporting Company	☐

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

As of February 16, 2018, 28,066,764 shares were outstanding, consisting of 21,273,979 shares of Common Stock $.01 par value and 6,792,785 shares of Class B Stock $.01 par value. The aggregate market value, as of the last business day of the Company's most recently completed second fiscal quarter, of the shares of Common Stock and Class B Stock of Astronics Corporation held by non-affiliates was approximately $731,000,000 (assuming conversion of all of the outstanding Class B Stock into Common Stock and assuming the affiliates of the Registrant to be its directors, executive officers and persons known to the Registrant to beneficially own more than 10% of the outstanding capital stock of the Corporation).

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Proxy Statement for the 2018 Annual Meeting of Shareholders to be held May 31, 2018 are incorporated by reference into Part III of this Report.

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FORWARD LOOKING STATEMENTS

Information included or incorporated by reference in this report that does not consist of historical facts, including statements accompanied by or containing words such as “may,” “will,” “should,” “believes,” “expects,” “expected,” “intends,” “plans,” “projects,” “approximate,” “estimates,” “predicts,” “potential,” “outlook,” “forecast,” “anticipates,” “presume” and “assume,” are forward-looking statements. Such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance and are subject to several factors, risks and uncertainties, the impact or occurrence of which could cause actual results to differ materially from the expected results described in the forward-looking statements. Certain of these factors, risks and uncertainties are discussed in the sections of this report entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” New factors, risks and uncertainties may emerge from time to time that may affect the forward-looking statements made herein. Given these factors, risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictive of future results. We disclaim any obligation to update the forward-looking statements made in this report.

PART I

ITEM 1. *BUSINESS*

Astronics Corporation (“Astronics” or the “Company”) is a leading provider of advanced technologies to the global aerospace, defense, electronics and semiconductor industries. Our products and services include advanced, high-performance electrical power generation, distribution and motion systems, lighting & safety systems, avionics products, aircraft structures, systems certification and automated test systems.

We have operations in the United States (“U.S.”), Canada and France. We design and build our products through our wholly owned subsidiaries Astronics Advanced Electronic Systems Corp. (“AES”); Astronics AeroSat Corporation (“AeroSat”); Armstrong Aerospace, Inc. (“Armstrong”); Astronics Test Systems, Inc. (“ATS”); Ballard Technology, Inc. (“Ballard”); Astronics Connectivity Systems and Certification Corp. (“CSC”); Astronics Custom Control Concepts Inc. (“CCC”); Astronics DME LLC (“DME”); Luminescent Systems, Inc. (“LSI”); Luminescent Systems Canada, Inc. (“LSI Canada”); Max-Viz, Inc. (“Max-Viz”); Peco, Inc. (“Peco”); and PGA Electronic s.a. (“PGA”).

Acquisitions

On January 14, 2015, the Company acquired all of the outstanding stock of Armstrong, located in Itasca, Illinois. Armstrong is a leading provider of engineering, design and certification solutions for commercial aircraft, specializing in connectivity, in-flight entertainment, and electrical power systems. Armstrong is included in our Aerospace segment.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC, located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately $10.2 million, net of $0.5 million in cash acquired. CCC is included in our Aerospace segment.

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company, Product Development Technologies, LLC and its subsidiaries, to become CSC, primarily located in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. Under the terms of the Agreement, the total consideration for the transaction was approximately $103.8 million, net of $0.2 million in cash acquired. CSC is included in our Aerospace Segment.

Products and Customers

Our Aerospace segment designs and manufactures products for the global aerospace industry. Product lines include lighting and safety systems, electrical power generation, distribution and motions systems, aircraft structures, avionics products, systems certification, connectivity and other products. Our Aerospace customers are the airframe manufacturers (“OEM”) that build aircraft for the commercial, military and general aviation markets, suppliers to those OEM’s, aircraft operators such as airlines and branches of the U.S. Department of Defense as well as the Federal Aviation Administration and airport operators. During 2017, this segment’s sales were divided 78% to the commercial transport market, 11% to the military aircraft market, 8% to the business jet market and 3% to other markets. Most of this segment’s sales are a result of contracts or purchase orders received from customers, placed on a day-to-day basis or for single year procurements rather than long-term multi-year contract commitments. On occasion, the Company does receive contractual commitments or blanket purchase orders from our customers covering multiple-year deliveries of hardware to our customers.

Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the semiconductor, aerospace, communications and weapons test systems as well as training and simulation devices for both commercial and military applications. In the Test Systems segment, Astronics’ products are sold to a global customer base including OEMs and prime government contractors for both electronics and military products. During 2017, this segment’s sales were divided 36% to the semiconductor market and 64% to the aerospace & defense market.

Sales by segment, geographic region, major customer and foreign operations are provided in Note 17 of Item 8, Financial Statements and Supplementary Data in this report.

We have a significant concentration of business with two major customers; Panasonic Avionics Corporation (“Panasonic”) and The Boeing Company (“Boeing”). Sales to Panasonic accounted for 19.1% of sales in 2017, 21.6% of sales in 2016, and 21.0% of sales in 2015. Sales to Boeing accounted for 16.8% of sales in 2017, 15.2% of sales in 2016, and 13.0% of sales in 2015.

Strategy

Our strategy is to increase our value by developing technologies and capabilities either internally or through acquisition, and use those capabilities to provide innovative solutions to the aerospace & defense, semiconductor and other markets where our technology can be beneficial.

Practices as to Maintaining Working Capital

Liquidity is discussed in Part II, Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operations, in the Liquidity and Capital Resources section of this report.

Competitive Conditions

We experience considerable competition in the market sectors we serve, principally with respect to product performance and price, from various competitors, many of which are substantially larger and have greater resources. Success in the markets we serve depends upon product innovation, customer support, responsiveness and cost management. We continue to invest in developing the technologies and engineering support critical to competing in our markets.

Government Contracts

All U.S. government contracts, including subcontracts where the U.S. government is the ultimate customer, may be subject to termination at the election of the government. Our revenue stream relies on military spending. Approximately 19% of our consolidated sales were made to the military aircraft and military test systems markets combined.

Raw Materials

Materials, supplies and components are purchased from numerous sources. We believe that the loss of any one source, although potentially disruptive in the short-term, would not materially affect our operations in the long-term.

Seasonality

Our business is typically not seasonal.

Backlog

At December 31, 2017, our backlog was $393.7 million million. At December 31, 2016, our backlog was $258.0 million. Backlog in the Aerospace segment was $298.6 million at December 31, 2017, of which $271.4 million is expected to be realized in 2018. Backlog in the Test Systems segment was $95.1 million at December 31, 2017, of which $75.3 million is expected to be realized in 2018.

Patents

We have a number of patents. While the aggregate protection of these patents is of value, our only material business that is dependent upon the protection afforded by these patents is our cabin power distribution products. Our patents and patent applications relate to electroluminescence, instrument panels, cord reels and handsets, and a broad patent covering the cabin power distribution technology. We regard our expertise and techniques as proprietary and rely upon trade secret laws and contractual arrangements to protect our rights. We have trademark protection in our major markets.

Research, Development and Engineering Activities

We are engaged in a variety of engineering and design activities as well as basic research and development activities directed to the substantial improvement or new application of our existing technologies. These costs are expensed when incurred and included in cost of sales. Research, development and engineering costs amounted to approximately $95.0 million in 2017, $88.9 million in 2016 and $90.3 million in 2015.

Employees

We employed approximately 2,500 employees at December 31, 2017. We consider our relations with our employees to be good. We have approximately 200 hourly production employees at Peco who are subject to collective bargaining agreements.

Available information

We file our financial information and other materials as electronically required with the Securities and Exchange Commission ("SEC"). These materials can be accessed electronically via the Internet at www.sec.gov. Such materials and other information about the Company are also available through our website at www.astronics.com.

ITEM 1A. *RISK FACTORS*

The loss of Panasonic or Boeing as major customers or a significant reduction in sales to either of those customers would reduce our sales and earnings. In 2017, we had a concentration of sales to Panasonic and Boeing representing approximately 19.1% and 16.8% of our sales, respectively. The loss of either of these customers or a significant reduction in sales to them would significantly reduce our sales and earnings.

The amount of debt we have outstanding, as well as any debt we may incur in the future, could have an adverse effect on our operational and financial flexibility. As of December 31, 2017, we had approximately $271.8 million of debt outstanding, of which $269.1 million is long-term debt. Changes to our level of debt subsequent to December 31, 2017 could have significant consequences to our business, including the following:

- Depending on interest rates and debt maturities, a substantial portion of our cash flow from operations could be dedicated to paying principal and interest on our debt, thereby reducing funds available for our acquisition strategy, capital expenditures or other purposes;
- A significant amount of additional debt could make us more vulnerable to changes in economic conditions or increases in prevailing interest rates;
- Our ability to obtain additional financing for acquisitions, capital expenditures or for other purposes could be impaired;
- The increase in the amount of debt we have outstanding increases the risk of non-compliance with some of the covenants in our debt agreements which require us to maintain specified financial ratios; and
- We may be more leveraged than some of our competitors, which may result in a competitive disadvantage.

We are subject to debt covenant restrictions. Our credit facility contains several financial and other restrictive covenants. A significant decline in our operating income could cause us to violate our covenants. A covenant violation would require a waiver by the lenders or an alternative financing arrangement be achieved. This could result in our being unable to borrow under our bank credit facility or being obliged to refinance and renegotiate the terms of our bank indebtedness. Historically both choices have been available to us, however, it is difficult to predict the availability of these options in the future.

We are subject to financing and interest rate exposure risks that could adversely affect our business, liquidity and operating results. Changes in the availability, terms and cost of capital, and increases in interest rates could cause our cost of doing business to increase and place us at a competitive disadvantage. At December 31, 2017, approximately 4% of our debt was at fixed interest rates with the remainder subject to variable interest rates.

Our future operating results could be impacted by estimates used to calculate impairment losses on long lived assets. The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant and subjective estimates and assumptions that may affect the reported amounts of long lived assets in the financial statements. These estimates are integral in the determination of whether a potential non-cash impairment loss exists as well as the calculation of that loss. Actual future results could differ from those estimates.

A write-off of all or part of our goodwill or other intangible assets could adversely affect our operating results and net worth. At December 31, 2017, goodwill and purchased intangible assets were approximately 17.1% and 20.9% of our total assets, respectively. Our goodwill and other intangible assets may increase in the future since our strategy includes growing through acquisitions. We may have to write-off all or part of our goodwill or purchased intangible assets if their value becomes impaired. Although this write-off would be a non-cash charge, it could reduce our earnings and net worth significantly.

The markets we serve are cyclical and sensitive to domestic and foreign economic conditions and events, which may cause our operating results to fluctuate. Demand for our products is, to a large extent, dependent on the demand and success of our customers' products where we are a supplier to an OEM. In our Aerospace segment, demand by the business jet markets for our products is dependent upon several factors, including capital investment, product innovations, economic growth and wealth creation and technology upgrades. In addition, the commercial airline industry is highly cyclical and sensitive to fuel price increases, labor disputes, global economic conditions, availability of capital to fund new aircraft purchases and upgrades of existing aircraft and passenger demand. A change in any of these factors could result in a reduction in the amount of air travel and the ability of airlines to invest in new aircraft or to upgrade existing aircraft. These factors would reduce orders for new aircraft and would likely reduce airlines' spending for cabin upgrades for which we supply products, thus reducing our sales and profits. A reduction in air travel may also result in our commercial airline customers being unable to pay our invoices on a timely basis or not at all.

We are a supplier on various new aircraft programs just entering or expected to begin production in the future. As with any new program, there is risk as to whether the aircraft or program will be successful and accepted by the market. As is customary for our business, we purchase inventory and invest in specific capital equipment to support our production requirements generally based on delivery schedules provided by our customer. If a program or aircraft is not successful, we may have to write-off all or a part of the inventory, accounts receivable and capital equipment related to the program. A write-off of these assets could result in a significant reduction of earnings and cause covenant violations relating to our debt agreements. This could result in our being unable to borrow additional funds under our bank credit facility or being obliged to refinance or renegotiate the terms of our bank indebtedness.

In our Test Systems segment, the market for our products is concentrated with a limited number of significant customers accounting for a substantial portion of the purchases of test equipment. In any one reporting period, a single customer or several customers may contribute an even larger percentage of our consolidated revenues. In addition, our ability to increase sales will depend, in part, on our ability to obtain orders from current or new significant customers. The opportunities to obtain orders from these customers may be limited, which may impair our ability to grow revenues. We expect that sales of our Test Systems products will continue to be concentrated with a limited number of significant customers for the foreseeable future. Additionally, demand for some of our test products is dependent upon government funding levels for our products, our ability to compete successfully for those contracts and our ability to develop products to satisfy the demands of our customers.

Our products are sold in highly competitive markets. Some of our competitors are larger, more diversified corporations and have greater financial, marketing, production and research and development resources. As a result, they may be better able to withstand the effects of periodic economic downturns. Our operations and financial performance will be negatively impacted if our competitors:

- develop products that are superior to our products;
- develop products that are more competitively priced than our products;
- develop methods of more efficiently and effectively providing products and services; or
- adapt more quickly than we do to new technologies or evolving customer requirements.

We believe that the principal points of competition in our markets are product quality, price, design and engineering capabilities, product development, conformity to customer specifications, quality of support after the sale, timeliness of delivery and effectiveness of the distribution organization. Maintaining and improving our competitive position will require continued investment in manufacturing, engineering, quality standards, marketing, customer service and support and our distribution networks. If we do not maintain sufficient resources to make these investments, or are not successful in maintaining our competitive position, our operations and financial performance will suffer.

Our future success depends to a significant degree upon the continued contributions of our management team and technical personnel. The loss of members of our management team could have a material and adverse effect on our business. In addition, competition for qualified technical personnel in our industry is intense, and we believe that our future growth and success will depend on our ability to attract, train and retain such personnel.

Future terror attacks, war, or other civil disturbances could negatively impact our business. Continued terror attacks, war or other disturbances could lead to economic instability and decreases in demand for our products, which could negatively impact our business, financial condition and results of operations. Terrorist attacks world-wide have caused instability from time to time in global financial markets and the aviation industry. The long-term effects of terrorist attacks on us are unknown. These attacks and the U.S. government's continued efforts against terrorist organizations may lead to additional armed hostilities or to further acts of terrorism and civil disturbance in the U.S. or elsewhere, which may further contribute to economic instability.

Our business and operations could be adversely impacted in the event of a failure of our information technology infrastructure or adversely impacted by a successful cyber-attack. We are dependent on various information technologies throughout our company to administer, store and support multiple business activities. We routinely experience various cybersecurity threats, threats to our information technology infrastructure, unauthorized attempts to gain access to our company sensitive information, and denial-of-service attacks as do our customers, suppliers and subcontractors. We conduct regular periodic training of our employees as to the protection of sensitive information which includes security awareness training intended to prevent the success of "phishing" attacks.

The threats we face vary from attacks common to most industries to more advanced and persistent, highly organized adversaries, including nation states, which target us and other defense contractors because we protect sensitive information. If we are unable to protect sensitive information, our customers or governmental authorities could question the adequacy of our threat mitigation and detection processes and procedures, and depending on the severity of the incident, our customers' data, our employees' data, our intellectual property, and other third party data (such as subcontractors, suppliers and vendors) could be compromised. As a consequence of their persistence, sophistication and volume, we may not be successful in defending against all such attacks. Due to the evolving nature of these security threats, the impact of any future incident cannot be predicted.

Although we work cooperatively with our customers, suppliers, and subcontractors to seek to minimize the impact of cyber threats, other security threats or business disruptions, we must rely on the safeguards put in place by these entities, which may affect the security of our information. These entities have varying levels of cyber security expertise and safeguards and their relationships with U.S. government contractors, such as Astronics, may increase the likelihood that they are targeted by the same cyber threats we face.

Our inability to adequately enforce and protect our intellectual property or defend against assertions of infringement could prevent or restrict our ability to compete. We rely on patents, trademarks and proprietary knowledge and technology, both internally developed and acquired, in order to maintain a competitive advantage. Our inability to defend against the unauthorized use of these rights and assets could have an adverse effect on our results of operations and financial condition. Litigation may be necessary to protect our intellectual property rights or defend against claims of infringement. This litigation could result in significant costs and divert our management's focus away from operations.

If we are unable to adapt to technological change, demand for our products may be reduced. The technologies related to our products have undergone, and in the future may undergo, significant changes. To succeed in the future, we will need to continue to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost effective basis. Our competitors may develop technologies and products that are more effective than those we develop or that render our technology and products obsolete or uncompetitive. Furthermore, our products could become unmarketable if new industry standards emerge. We may have to modify our products significantly in the future to remain competitive, and new products we introduce may not be accepted by our customers.

Our new product development efforts may not be successful, which would result in a reduction in our sales and earnings. We may experience difficulties that could delay or prevent the successful development of new products or product enhancements, and new products or product enhancements may not be accepted by our customers. In addition, the development expenses we incur may exceed our cost estimates, and new products we develop may not generate sales sufficient to offset our costs. If any of these events occur, our sales and profits could be adversely affected.

We depend on government contracts and subcontracts with defense prime contractors and sub-contractors that may not be fully funded, may be terminated, or may be awarded to our competitors. The failure to be awarded these contracts, the failure to receive funding or the termination of one or more of these contracts could reduce our sales. Sales to the U.S. government and its prime contractors and subcontractors represent a significant portion of our business. The funding of these programs is generally subject to annual congressional appropriations, and congressional priorities are subject to change. In addition, government expenditures for defense programs may decline or these defense programs may be terminated. A decline in governmental expenditures or the termination of existing contracts may result in a reduction in the volume of contracts awarded to us. We have resources applied to specific government contracts and if any of those contracts were terminated, we may incur substantial costs redeploying those resources.

If our subcontractors or suppliers fail to perform their contractual obligations, our prime contract performance and our ability to obtain future business could be materially and adversely impacted. Many of our contracts involve subcontracts with other companies upon which we rely to perform a portion of the services we must provide to our customers.

There is a risk that we may have disputes with our subcontractors, including disputes regarding the quality and timeliness of work performed by the subcontractor or customer concerns about the subcontractor. Failure by our subcontractors to satisfactorily provide, on a timely basis, the agreed-upon supplies or perform the agreed-upon services may materially and adversely impact our ability to perform our obligations with our customer. Subcontractor performance deficiencies could result in a customer terminating our contract for default. A default termination could expose us to liability and substantially impair our ability to compete for future contracts and orders. In addition, a delay in our ability to obtain components and equipment parts from our suppliers may affect our ability to meet our customers' needs and may have an adverse effect upon our profitability.

Our results of operations are affected by our fixed-price contracts, which could subject us to losses in the event that we have cost overruns. For the year ended December 31, 2017, fixed-price contracts represented almost all of the Company's sales. On fixed-price contracts, we agree to perform the scope of work specified in the contract for a predetermined price. Depending on the fixed price negotiated, these contacts may provide us with an opportunity to achieve higher profits based on the relationship between our costs and the contract's fixed price. However, we bear the risk that increased or unexpected costs may reduce our profit.

Some of our contracts contain late delivery penalties. Failure to deliver in a timely manner due to supplier problems, development schedule slides, manufacturing difficulties, or similar schedule related events could have a material adverse effect on our business.

The failure of our products may damage our reputation, necessitate a product recall or result in claims against us that exceed our insurance coverage, thereby requiring us to pay significant damages. Defects in the design and manufacture of our products may necessitate a product recall. We include complex system design and components in our products that could contain errors or defects, particularly when we incorporate new technology into our products. If any of our products are defective, we could be required to redesign or recall those products or pay substantial damages or warranty claims. Such an event could result in significant expenses, disrupt sales and affect our reputation and that of our products. We are also exposed to product liability claims. We carry aircraft and non-aircraft product liability insurance consistent with industry norms. However, this insurance coverage may not be sufficient to fully cover the payment of any potential claim. A product recall or a product liability claim not covered by insurance could have a material adverse effect on our business, financial condition and results of operations.

Changes in discount rates and other estimates could affect our future earnings and equity. Our goodwill asset impairment evaluations are determined using valuations that involve several assumptions, including discount rates, cash flow estimates, growth rates and terminal values. Certain of these assumptions, particularly the discount rate, are based on market conditions and are outside of our control. Changes in these assumptions could affect our future earnings and equity.

Additionally, pension obligations and the related costs are determined using actual results and actuarial valuations that involve several assumptions. The most critical assumption is the discount rate. Other assumptions include mortality, salary increases and retirement age. The discount rate assumptions are based on current market conditions and are outside of our control. Changes in these assumptions could affect our future earnings and equity.

Contracting in the defense industry is subject to significant regulation, including rules related to bidding, billing and accounting kickbacks and false claims, and any non-compliance could subject us to fines and penalties or possible debarment. Like all government contractors, we are subject to risks associated with this contracting. These risks include the potential for substantial civil and criminal fines and penalties. These fines and penalties could be imposed for failing to follow procurement integrity and bidding rules, employing improper billing practices or otherwise failing to follow cost accounting standards, receiving or paying kickbacks or filing false claims. We have been, and expect to continue to be, subjected to audits and investigations by government agencies. The failure to comply with the terms of our government contracts could harm our business reputation. It could also result in suspension or debarment from future government contracts.

If we fail to meet expectations of securities analysts or investors due to fluctuations in our revenue or operating results, our stock price could decline significantly. Our revenue and earnings may fluctuate from quarter to quarter due to a number of factors, including delays or cancellations of programs. It is likely that in some future quarters our operating results may fall below the expectations of securities analysts or investors. In this event, the trading price of our stock could decline significantly.

Our operations in foreign countries expose us to political and currency risks and adverse changes in local legal and regulatory environments. In 2017, approximately 8.6% of our sales were made by our subsidiaries in France and Canada. Net assets held by these subsidiaries total $47.4 million at December 31, 2017. Our financial results may be adversely affected by fluctuations in foreign currencies and by the translation of the financial statements of our foreign subsidiaries from local currencies into U.S. dollars. We expect international operations and export sales to continue to contribute to our earnings for the foreseeable future. Both the sales from international operations and export sales are subject in varying degrees to risks inherent in doing business outside of the U.S. Such risks include the possibility of unfavorable circumstances arising from host country laws or regulations, changes in tariff and trade barriers and import or export licensing requirements, and political or economic reprioritization, insurrection, civil disturbance or war.

Government regulations could limit our ability to sell our products outside the U.S. and could otherwise adversely affect our business. Certain of our sales are subject to compliance with U.S. export regulations. Our failure to obtain, or fully adhere to the limitations contained in, the requisite licenses, meet registration standards or comply with other government export regulations would hinder our ability to generate revenues from the sale of our products outside the U.S. Compliance with these government regulations may also subject us to additional fees and operating costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position. In order to sell our products in European Union countries, we must satisfy certain technical requirements. If we are unable to comply with those requirements with respect to a significant quantity of our products, our sales in Europe would be restricted. Doing business internationally also subjects us to numerous U.S. and foreign laws and regulations, including regulations relating to import-export control, technology transfer restrictions, foreign corrupt practices and anti-boycott provisions. Our failure, or failure by an authorized agent or representative that is attributable to us, to comply with these laws and regulations could result in administrative, civil or criminal liabilities and could, in the extreme case, result in monetary penalties, suspension or debarment from government contracts or suspension of our export privileges, which would have a material adverse effect on us.

Our stock price is volatile. For the year ended December 31, 2017, our stock price ranged from a low of $25.13 to a high of $43.87. The price of our common stock has been and likely will continue to be subject to wide fluctuations in response to a number of events and factors, such as:

- quarterly variations in operating results;
- variances of our quarterly results of operations from securities analyst estimates;
- changes in financial estimates;
- announcements of technological innovations and new products;
- news reports relating to trends in our markets; and
- the cancellation of major contracts or programs with our customers.

In addition, the stock market in general, and the market prices for companies in the aerospace & defense industry in particular, have experienced significant price and volume fluctuations that often have been unrelated to the operating performance of the companies affected by these fluctuations. These broad market fluctuations may adversely affect the market price of our common stock, regardless of our operating performance.

We may incur losses and liabilities as a result of our acquisition strategy. Growth by acquisition involves risks that could adversely affect our financial condition and operating results, including:

- diversion of management time and attention from our core business;
- the potential exposure to unanticipated liabilities;
- the potential that expected benefits or synergies are not realized and that operating costs increase;
- the risks associated with incurring additional acquisition indebtedness, including that additional indebtedness could limit our cash flow availability for operations and our flexibility;
- difficulties in integrating the operations and personnel of acquired companies; and
- the potential loss of key employees, suppliers or customers of acquired businesses.

In addition, any acquisition, once successfully integrated, could negatively impact our financial performance if it does not perform as planned, does not increase earnings, or does not prove otherwise to be beneficial to us.

We currently are involved or may become involved in the future, in legal proceedings that, if adversely adjudicated or settled, could materially impact our financial condition. As an aerospace company, we may become a party to litigation in the ordinary course of our business, including, among others, matters alleging product liability, warranty claims, breach of commercial or government contract or other legal actions. In general, litigation claims can be expensive and time consuming to bring or defend against and could result in settlements or damages that could significantly impact results of operations and financial condition.

We are a defendant in actions filed in the Regional State Court of Mannheim, Germany (Lufthansa Technik AG v. Astronics Advanced Electronics Systems Corp.) and the United States District for the Western District of Washington relating to an allegation of patent infringement. On December 29, 2010, Lufthansa Technik AG ("Lufthansa") filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa's claim asserts that our subsidiary, AES sold, marketed and brought into use in Germany a power supply system that infringes upon a German patent held by Lufthansa. The relief sought by Lufthansa includes requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers since November 26, 2003 and compensation for damages. The claim does not specify an estimate of damages and a damages claim will be made by Lufthansa only if it receives a favorable ruling on the determination of infringement.

On February 6, 2015, the Regional State Court of Mannheim, Germany rendered its decision that the patent was infringed. The judgment does not require AES to recall products that are already installed in aircraft or have been sold to other end users. On July 15, 2015, Lufthansa advised AES of their intention to enforce the accounting provisions of the decision, which required AES to provide certain financial information regarding sales of the infringing product to enable Lufthansa to make an estimate of requested damages. Additionally, if Lufthansa provides the required bank guarantee specified in the decision, the Company may be required to offer a recall of products that are in the distribution channels in Germany. No such bank guarantee has been issued to date. As of December 31, 2017 there are no products in the distribution channels in Germany.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Court issued its ruling and upheld the lower court's decision. The Company has submitted a petition to grant AES leave for appeal to the Federal Supreme Court. The Company believes it has valid defenses to refute the decision. Should the Federal Supreme Court decide to hear the case, the appeal process is estimated to extend up to two years. We estimate AES's potential exposure related to this matter to be approximately $1 million to $3 million. As loss exposure is not probable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom and in France against AES. AES has been served in the case in France, but not in the case in the United Kingdom. In those cases, Lufthansa accuses AES of manufacturing, using, selling and offering for sale a power supply system that infringes upon a Lufthansa patent in those respective countries. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

Other than these proceedings, we are not party to any significant pending legal proceedings that management believes will result in a material adverse effect on our financial condition or results of operations.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None

ITEM 2. *PROPERTIES*

On December 31, 2017, we own or lease 1.2 million square feet of space in the U.S., Canada and France, distributed as follows:

	Owned	Leased	Total
Aerospace:			
Clackamas, OR	237,000	—	237,000
Kirkland, WA	97,000	39,000	136,000
East Aurora, NY	125,000	—	125,000
Ft. Lauderdale, FL	96,000	—	96,000
Lebanon, NH	83,000	—	83,000
Montierchaume, France*	—	80,000	80,000
Itasca, IL	49,000	—	49,000
Amherst, NH	—	28,000	28,000
Montreal, Quebec, Canada	—	25,000	25,000
Everett, WA	—	22,000	22,000
Chicago, IL	—	2,000	2,000
Kent, WA	—	65,000	65,000
Waukegan, IL	—	41,000	41,000
Lake Zurich, IL	—	36,000	36,000
Lviv City, Ukraine	—	6,000	6,000
Wheatley, Oxfordshire, UK	—	3,000	3,000
Carlsbad, CA	—	1,000	1,000
Aerospace Square Feet	687,000	348,000	1,035,000
Test Systems:			
Irvine, CA*	—	99,000	99,000
Orlando, FL	—	51,000	51,000
Test Systems Square Feet	—	150,000	150,000
Total Square Feet	687,000	498,000	1,185,000

* - Capitalized leases.

Upon the expiration of our current leases, we believe that we will be able to either secure renewal terms or enter into leases for or purchases of alternative locations at market terms. We believe that our properties have been adequately maintained and are generally in good condition.

ITEM 3. *LEGAL PROCEEDINGS*

On December 29, 2010, Lufthansa Technik AG (“Lufthansa”) filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa’s claim asserts that our subsidiary, AES sold, marketed and brought into use in Germany a power supply system that infringes upon a German patent held by Lufthansa. The relief sought by Lufthansa includes requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers since November 26, 2003 and compensation for damages. The claim does not specify an estimate of damages and a damages claim will be made by Lufthansa only if it receives a favorable ruling on the determination of infringement.

On February 6, 2015, the Regional State Court of Mannheim, Germany rendered its decision that the patent was infringed. The judgment does not require AES to recall products that are already installed in aircraft or have been sold to other end users. On July 15, 2015, Lufthansa advised AES of their intention to enforce the accounting provisions of the decision, which required AES to provide certain financial information regarding sales of the infringing product to enable Lufthansa to make an estimate of requested damages. Additionally, if Lufthansa provides the required bank guarantee specified in the decision, the Company may be required to offer a recall of products that are in the distribution channels in Germany. No such bank guarantee has been issued to date. As of December 31, 2017, there are no products in the distribution channels in Germany.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Court issued its ruling and upheld the lower court's decision. The Company has submitted a petition to grant AES leave for appeal to the Federal Supreme Court. The Company believes it has valid defenses to refute the decision. Should the Federal Supreme Court decide to hear the case, the appeal process is estimated to extend up to two years. We estimate AES's potential exposure related to this matter to be approximately $1 million to $3 million. As loss exposure is not probable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

On November 26, 2014, Lufthansa filed a complaint in the United States District for the Western District of Washington. Lufthansa's complaint in this action alleges that AES manufactures, uses, sells and offers for sale a power supply system that infringes upon a U.S. patent held by Lufthansa. The patent at issue in the U.S. action is based on technology similar to that involved in the German action. On April 25, 2016, the Court issued its ruling on claim construction, holding that the sole independent claim in the patent is indefinite, rendering all claims in the patent indefinite. Based on this ruling, AES filed a motion for summary judgment on the grounds that the Court's ruling that the patent is indefinite renders the patent invalid and unenforceable. On July 20, 2016, the U.S. District Court granted the motion for summary judgment and issued an order dismissing all claims against AES with prejudice. Lufthansa appealed the District Court's decision to the United States Court of Appeals for the Federal Circuit. On October 19, 2017, the Federal Circuit affirmed the District Court's decision, holding that the sole independent claim of the patent is indefinite, rendering all claims on the patent indefinite. Lufthansa did not file a petition for en banc rehearing or petition the U.S. Supreme Court for a writ of certiorari. Therefore, there is no longer a risk of exposure from that lawsuit.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom and in France against AES. AES has been served in the case in France, but not in the case in the United Kingdom. In those cases, Lufthansa accuses AES of manufacturing, using, selling and offering for sale a power supply system that infringes upon a Lufthansa patent in those respective countries. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not Applicable

PART II

ITEM 5. ***MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES***

The table below sets forth the range of prices for the Company's Common Stock, traded on the NASDAQ National Market System, for each quarterly period during the last two years. The approximate number of shareholders of record as of February 16, 2018, was 811 for Common Stock and 2,112 for Class B Stock.

2017	High	Low
First	$ 34.77	$ 28.79
Second	$ 33.29	$ 29.73
Third	$ 31.44	$ 25.13
Fourth	$ 43.87	$ 30.15

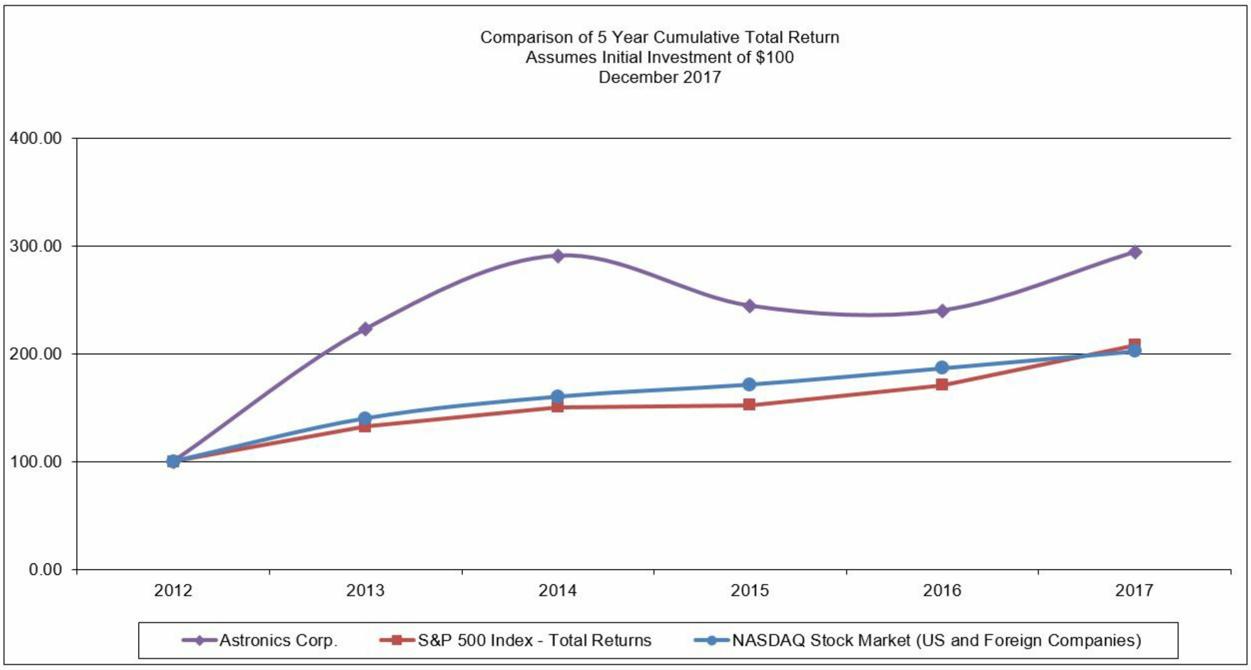
2016	High	Low
First	$ 34.55	$ 21.76
Second	$ 34.22	$ 27.65
Third	$ 39.17	$ 28.05
Fourth	$ 40.70	$ 30.76

The Company has not paid any cash dividends in the three-year period ended December 31, 2017. The Company has no plans to pay cash dividends as it plans to retain all cash from operations as a source of capital to finance growth in the business.

On September 26, 2016, the Company announced a three-for-twenty distribution of Class B Stock to holders of both Common and Class B Stock. Stockholders received three shares of Class B Stock for every twenty shares of Common and Class B Stock held on the record date of October 11, 2016. Fractional shares were paid in cash. All share quantities, share prices and per share data reported throughout this report have been adjusted to reflect the impact of this distribution.

On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to $50 million of common stock (the "Buyback Program"). The Buyback Program allowed the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Company has repurchased approximately 1,675,000 shares and has completed that program. On December 12, 2017, the Company's Board of Directors authorized an additional repurchase of up to $50 million of common stock. No amounts have been repurchased under the new program as of December 31, 2017.

The following graph and table shows the performance of the Company's common stock compared with the S&P 500 Index — Total Return and the NASDAQ US and Foreign Companies for a $100 investment made December 31, 2012:



		2012	2013	2014	2015	2016	2017
Astronics Corp.	Return %	—	122.90	30.51	(15.99)	(1.75)	22.55
	Cum $	100.00	222.90	290.91	244.38	240.11	294.24
S&P 500 Index - Total Returns	Return %	—	32.39	13.69	1.38	11.96	21.83
	Cum $	100.00	132.39	150.51	152.59	170.84	208.14
NASDAQ Stock Market (US and Foreign Companies)	Return %	—	40.10	14.43	6.99	8.82	8.43
	Cum $	100.00	140.10	160.32	171.53	186.65	202.39

ITEM 6. *SELECTED FINANCIAL DATA*

Five-Year Performance Highlights

(Amounts in thousands, except for employee and per share data)	2017 (5)	2016	2015 (4)	2014 (3)	2013 (2)
RESULTS OF OPERATIONS:					
Sales	$ 624,464	$ 633,123	$ 692,279	$ 661,039	$ 339,937
Net Income	$ 19,679	$ 48,424	$ 66,974	$ 56,170	$ 27,266
Impairment Loss (6)	$ 16,237	$ —	$ —	$ —	$ —
Net Margin	3.2%	7.6%	9.7%	8.5%	8.0%
Diluted Earnings Per Share (1)	$ 0.67	$ 1.61	$ 2.22	$ 1.87	$ 0.94
Weighted Average Shares Outstanding – Diluted (1)	29,320	30,032	30,179	29,970	29,136
Return on Average Equity	5.9%	15.2%	25.3%	28.1%	18.4%
YEAR-END FINANCIAL POSITION:					
Working Capital	$ 212,438	$ 168,513	$ 145,735	$ 136,602	$ 125,961
Total Assets	$ 735,956	$ 604,344	$ 609,243	$ 562,910	$ 491,271
Indebtedness	$ 271,767	$ 148,120	$ 169,789	$ 183,008	$ 200,320
Shareholders' Equity	$ 329,927	$ 337,449	$ 300,225	$ 228,177	$ 171,509
Book Value Per Share (1)	$ 11.77	$ 11.60	$ 10.21	$ 7.87	$ 6.05
OTHER YEAR-END DATA:					
Depreciation and Amortization	$ 27,063	$ 25,790	$ 25,309	$ 27,254	$ 11,059
Capital Expenditures	$ 13,478	$ 13,037	$ 18,641	$ 40,882	$ 6,868
Shares Outstanding (1)	28,038	29,098	29,405	29,003	28,342
Number of Employees	2,516	2,304	2,304	2,041	1,715

(1) - Diluted Earnings Per Share, Weighted Average Shares Outstanding - Diluted, Book Value Per Share and Shares Outstanding have been adjusted for the impact of the October 11, 2016 fifteen percent Class B stock distribution, October 8, 2015 fifteen percent Class B stock distribution, the September 5, 2014 twenty percent Class B stock distribution and the October 10, 2013 twenty percent Class B stock distribution.

(2) - Information includes the results of Peco, acquired on July 18, 2013, AeroSat acquired on October 1, 2013 and PGA acquired December 5, 2013, each from the acquisition date forward.

(3) - Information includes the results of ATS, acquired on February 28, 2014, from the acquisition date forward.

(4) - Information includes the results of Armstrong, acquired on January 14, 2015, from the acquisition date forward.

(5) - Information includes the results of CCC acquired on April 3, 2017 and CSC acquired December 1, 2017, each from the acquisition date forward.

(6) - The Company recorded a $16.2 million goodwill impairment charge during the fourth quarter of 2017. Refer to "Item 7. Management's Discussion and Analysis of Results of Operations and Financial Condition" and Note 5 of our consolidated financial statements for additional information on Goodwill.

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

OVERVIEW

Astronics, through its subsidiaries, designs and manufactures advanced, high-performance electrical power generation, distribution and motion systems, lighting & safety systems, avionics products, aircraft structures, systems certification and automated test systems.

Our strategy is to increase our value by developing technologies and capabilities either internally or through acquisition, and use those capabilities to provide innovative solutions to the aerospace & defense, semiconductor and other markets where our technology can be beneficial.

We have two reportable segments, Aerospace and Test Systems. Our Aerospace segment has thirteen principal operating facilities with one located in New York State, Florida, Oregon, Quebec, Canada and Montierchaume, France; two located in

New Hampshire; and three located in each of Illinois and Washington State. Our Test Systems segment has facilities located in Florida and California.

Our Aerospace segment serves three primary markets. They are the military, commercial transport and business jet markets. Our Test Systems segment serves the aerospace & defense and semiconductor markets.

Important factors affecting our growth and profitability are the rate at which new aircraft are produced, government funding of military programs, our ability to have our products designed into new aircraft and the rates at which aircraft owners, including commercial airlines, refurbish or install upgrades to their aircraft. New aircraft build rates and aircraft owners spending on upgrades and refurbishments is cyclical and dependent on the strength of the global economy. Once designed into a new aircraft, the spare parts business is frequently retained by the Company. Future growth and profitability of the test business is dependent on developing and procuring new and follow-on business in the semiconductor market as well as with the military. The nature of our test systems business is such that it pursues large multi-year projects. There can be significant periods of time between orders in this business which may result in large fluctuations of sales and profit levels and backlog from period to period.

Each of the markets that we serve presents opportunities that we expect will provide growth for the Company over the long-term. We continue to look for opportunities in all of our markets to capitalize on our core competencies to expand our existing business and to grow through strategic acquisitions.

Challenges which continue to face us include improving shareholder value through increasing profitability. Increasing profitability is dependent on many things, primarily revenue growth and the Company’s ability to control operating expenses and to identify means of creating improved productivity. Revenue is driven by increased build rates for existing aircraft, market acceptance and economic success of new aircraft and our products, continued government funding of defense programs, the Company’s ability to obtain production contracts for parts we currently supply or have been selected to design and develop for new aircraft platforms and continually identifying and winning new business for our Test Systems segment. Our semiconductor test products are highly dependent on winning new and follow-on programs with our current customers as well as developing new customers. Reduced aircraft build rates driven by a weak economy, tight credit markets, reduced air passenger travel and an increasing supply of used aircraft on the market would likely result in reduced demand for our products, which will result in lower profits. Reduction of defense spending may result in fewer opportunities for us to compete, which could result in lower profits in the future. Many of our newer development programs are based on new and unproven technology and at the same time we are challenged to develop the technology on a schedule that is consistent with specific programs. We will continue to address these challenges by working to improve operating efficiencies and focusing on executing on the growth opportunities currently in front of us.

ACQUISITIONS

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company Product Development Technologies, LLC and its subsidiaries, to become CSC, located primarily in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. Under the terms of the Agreement, the total consideration for the transaction was approximately $103.8 million, net of $0.2 million in cash acquired. CSC is included in our Aerospace Segment.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company acquired substantially all the assets and certain liabilities of CCC, located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately $10.2 million, net of $0.5 million in cash acquired. CCC is included in our Aerospace segment.

On January 14, 2015, the Company purchased 100% of the equity of Armstrong for approximately $52.3 million in cash. Armstrong, located in Itasca, Illinois, is a leading provider of engineering, design and certification solutions for commercial aircraft, specializing in connectivity, in-flight entertainment, and electrical power systems. Armstrong is included in our Aerospace segment.

MARKETS

Commercial Transport Market

Sales to the commercial transport market include sales of electrical power generation, distribution and motion products, lighting & safety products, avionics products, systems certification and structures products. Sales to this market totaled approximately $414.5 million or 66.4% of our consolidated sales in 2017.

Maintaining and growing sales to the commercial transport market will depend on airlines' capital spending budgets for cabin upgrades as well as the purchase of new aircraft by global airlines. This spending by the airlines is impacted by their profits, cash flow and available financing as well as competitive pressures between the airlines to improve the travel experience for their passengers. We expect that new aircraft will be equipped with more passenger and aircraft connectivity and in-seat power than previous generation aircraft. This market has experienced strong growth from airlines installing in-seat passenger power systems on their existing and newly delivered aircraft. Our ability to maintain and grow sales to this market depends on our ability to maintain our technological advantages over our competitors and maintain our relationships with major in-flight entertainment suppliers and global airlines.

Military Aerospace Market

Sales to the military aerospace market include sales of lighting & safety products, avionics products, electrical power & motion products and other products. Sales to this market totaled approximately 9.8% of our consolidated revenue and amounted to $61.3 million in 2017.

The military market is dependent on governmental funding which can change from year to year. Risks are that overall spending may be reduced in the future, specific programs may be eliminated or that we fail to win new business through the competitive bid process. Astronics does not have significant reliance on any one program such that cancellation of a particular program will cause material financial loss. We believe that we will continue to have opportunities similar to past years regarding this market.

Business Jet Market

Sales to the business jet aerospace market include sales of lighting & safety products, avionics products, and electrical power & motion products. Sales to this market totaled approximately 6.6% of our consolidated revenue in 2017 and amounted to $41.3 million.

Sales to the business jet market are driven by our ship set content on new aircraft and build rates of new aircraft. Business jet OEM build rates continue to be significantly impacted by slow global wealth creation and corporate profitability which have been negatively affected during the past several years by global economic uncertainty among prospective buyers. Our sales to the business jet market will continue to be challenged in the upcoming year as business jet aircraft production rates are not expected to increase significantly during 2018. Despite the current market conditions, we continue to see opportunities on new aircraft currently in the design phase to employ our lighting & safety, electrical power and avionics technologies in the business jet market. There is risk involved in the development of any new aircraft including the risk that the aircraft will not ultimately be produced or that it will be produced in lower quantities than originally expected and thus impacting our return on our engineering and development efforts.

Other Aerospace

Sales of our other aerospace products include sales of airfield lighting products and other Peco products. Sales to this market totaled approximately 2.8% of our total revenue or $17.5 million in 2017.

Tests Systems Products

Our Test Systems segment accounted for approximately 14.4% of our consolidated sales in 2017 and amounted to $89.9 million. Sales to the semiconductor market were approximately $32.0 million. Sales to the aerospace & defense market were approximately $57.9 million in 2017.

CRITICAL ACCOUNTING POLICIES

Our financial statements and accompanying notes are prepared in accordance with U.S. generally accepted accounting principles. The preparation of the Company's financial statements requires management to make estimates, assumptions and judgments that affect the amounts reported. These estimates, assumptions and judgments are affected by management's application of accounting policies, which are discussed in the Notes to Consolidated Financial Statements, Note 1 of Item 8, Financial Statements and Supplementary Data of this report. The critical accounting policies have been reviewed with the Audit Committee of our Board of Directors.

Revenue Recognition

The vast majority of our sales agreements are for standard products and services, with revenue recognized on the accrual basis at the time of shipment of goods, transfer of title and customer acceptance, where required. There are no significant contracts allowing for right of return. To a limited extent, certain contracts involve multiple elements (such as equipment and service). The Company recognizes revenue for delivered elements when they have stand-alone value to the customer, they have been accepted by the customer, and for which there are only customary refund or return rights. Arrangement consideration is allocated to the deliverables by use of the relative selling price method. The selling price used for each deliverable is based on vendor-specific objective evidence ("VSOE") if available, third party-evidence ("TPE") if VSOE is not available, or estimated selling price if neither VSOE nor TPE is available. Estimated selling price is determined in a manner consistent with that used to establish the price to sell the deliverable on a standalone basis.

For prepaid service contracts, sales revenue is recognized on a straight-line basis over the term of the contract, unless historical evidence indicates the costs are incurred on other than a straight-line basis.

Revenue of approximately $21.0 million, $20.7 million and $17.2 million for the years ended December 31, 2017, 2016 and 2015, respectively, was recognized from long-term, fixed-price contracts using the percentage-of-completion method of accounting, measured by multiplying the estimated total contract value by the ratio of actual contract costs incurred to date to the estimated total contract costs. The Company makes significant estimates involving its usage of percentage-of-completion accounting to recognize contract revenues. The Company periodically reviews contracts in process for estimates-to-completion, and revises estimated gross profit accordingly. While the Company believes its estimated gross profit on contracts in process is reasonable, unforeseen events and changes in circumstances can take place in a subsequent accounting period that may cause the Company to revise its estimated gross profit on one or more of its contracts in process. Accordingly, the ultimate gross profit realized upon completion of such contracts can vary significantly from estimated amounts between accounting periods. For contracts with anticipated losses at completion, a charge is taken against income for the amount of the entire loss in the period in which it is estimated.

Reviews for Impairment of Long-Lived Assets

Goodwill Impairment Testing

Our goodwill is the result of the excess of purchase price over net assets acquired from acquisitions. As of December 31, 2017, we had approximately $125.6 million of goodwill. As of December 31, 2016, we had approximately $115.2 million of goodwill. The change in goodwill is primarily due to the goodwill recorded associated with the acquisitions of CCC and CSC of $2.3 million and $23.4 million, respectively, offset by a goodwill impairment of $16.2 million at Armstrong.

We identify our reporting units by assessing whether the components of our operating segments constitute businesses for which discrete financial information is available and segment management regularly reviews the operating results of those components. The Test Systems operating segment is its own reporting unit while the other reporting units are one level below our Aerospace operating segment.

Companies may perform a qualitative assessment as the initial step in the annual goodwill impairment testing process for all or selected reporting units under certain circumstances. Companies are also allowed to bypass the qualitative analysis and perform a quantitative analysis if desired. Economic uncertainties and the length of time from the calculation of a baseline fair value are factors that we would consider in determining whether to perform a quantitative test.

When we evaluate the potential for goodwill impairment using a qualitative assessment, we consider factors including, but not limited to, macroeconomic conditions, industry conditions, the competitive environment, changes in the market for our products and services, regulatory and political developments, entity specific factors such as strategy and changes in key personnel and overall financial performance. If, after completing this assessment, it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we proceed to a quantitative two-step impairment test.

Quantitative testing first requires a comparison of the fair value of each reporting unit to the carrying value. We use the discounted cash flow method to estimate the fair value of each of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected revenue growth rates, operating profit margins and cash flows, the terminal growth rate and the discount rate. Management projects revenue growth rates, operating margins and cash flows based on each reporting unit's current business, expected developments and operational strategies. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and any loss must be measured. We early adopted ASU No. 2017-04 on January 1, 2017. Accordingly, goodwill impairment is measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill.

In 2017, we performed quantitative assessments for the nine reporting units which had goodwill as of the first day of the fourth quarter. Based on our quantitative assessments of our reporting units, the Company recorded a full impairment charge of approximately $16.2 million in the December 31, 2017 consolidated statement of operations associated to the Armstrong reporting unit. The impairment loss was incurred in the Aerospace segment and is reported on the Impairment Loss line of the Consolidated Statements of Operations.

Amortized Intangible Asset Impairment Testing

Amortizable intangible assets with a carrying value of $153.5 million at December 31, 2017 and $98.1 million at December 31, 2016 are amortized over their assigned useful lives. We test these long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. The recoverability test consists of comparing the projected undiscounted cash flows associated with the asset to its carrying amount. An impairment loss would then be recognized for the carrying amount in excess of its fair value. There were no impairment charges in 2017, 2016 or 2015.

Depreciable Asset Impairment Testing

Property, plant and equipment with a carrying value of $125.8 million at December 31, 2017 and $122.8 million at December 31, 2016 are depreciated over their assigned useful lives. We test these long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. The recoverability test consists of comparing the projected undiscounted cash flows, with its carrying amount. An impairment loss would then be recognized for the carrying amount in excess of its fair value. There were no impairment charges in 2017, 2016 or 2015.

Inventory Valuation

We record valuation reserves to provide for excess, slow moving or obsolete inventory or to reduce inventory to the lower of cost or net realizable value. In determining the appropriate reserve, management considers the age of inventory on hand, the overall inventory levels in relation to forecasted demands as well as reserving for specifically identified inventory that we believe is no longer salable. At December 31, 2017, our reserve for inventory valuation was $18.0 million, or 10.7% of gross inventory. At December 31, 2016, our reserve for inventory valuation was $15.4 million, or 11.7% of gross inventory.

Deferred Tax Asset Valuation Allowances

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. We record a valuation allowance to reduce deferred tax assets to the amount of future tax benefit that we believe is more likely than not to be realized. Significant assumptions regarding future profitability is required to estimate the value of these deferred tax assets. We consider allowable tax carryforward periods, historical earnings performance, tax planning strategies and recent earnings projections to determine the amount of the valuation allowance. Changes in these factors could cause us to adjust our valuation allowance, which would impact our income tax expense and the carrying value of these assets when we determine that these factors have changed.

As of December 31, 2017, we had net deferred tax liabilities of $2.3 million. Included in the net deferred tax liabilities are approximately $15.4 million in deferred tax assets net of a $7.8 million valuation allowance. These deferred tax assets principally relate to employee benefit liabilities, asset reserves, leases, deferred revenue, state and foreign net operating loss carry-forwards, and state general business tax credit carry-forwards.

As of December 31, 2016, we had net deferred tax liabilities of $8.7 million. Included in the net deferred tax liabilities are approximately $24.2 million in deferred tax assets net of a $3.8 million valuation allowance. These deferred tax assets principally relate to employee benefit liabilities, asset reserves, leases, deferred revenue, state net operating loss carry-forwards and state general business tax credit carry-forwards.

Because of the uncertainty as to the Company's ability to generate sufficient future taxable income in certain states, the Company has recorded the valuation allowances accordingly in 2017 and 2016.

Supplemental Executive Retirement Plan (SERP) Assumptions

We maintain two non-qualified defined benefit supplemental retirement plans ("SERP" and "SERP II") for certain executive officers and retired former executive officers. Expense for these plans in 2017 was $1.9 million and in 2016 was $1.9 million. Plan obligations and the related costs are determined using actuarial valuations that involve several assumptions that may be highly uncertain and may have a material impact on the financial statements if different reasonable assumptions had been used. The most critical assumptions include the discount rate, future wage increases, retirement age and life expectancy. The discount rate is used to state expected future cash flows at present value. Using a lower discount rate increases the present value of pension obligations and increases pension expense. For determining the discount rate the Company considers long-term interest rates for high-grade corporate bonds. The discount rate for determining the expense recognized in 2017 was 4.20% compared with 4.45% in 2016. We will use a discount rate of 3.60% in determining our 2018 expense. The assumption for compensation increases takes a long-term view of inflation and performance based salary adjustments based on the Company's approach to executive compensation. The rate used for future wage increases was 2-3%. It was assumed that each participant retires after fully vesting in the plan at age 62 or 65. A 100 point increase in the discount rate we used would decrease our annual pension expense for 2018 by $0.3 million. If we had assumed annual wage increases of 3-4%, our 2018 pension expense would increase approximately $0.2 million.

Stock-Based Compensation

We have stock-based compensation plans, which include non-qualified stock options as well as incentive stock options. Expense recognized for stock-based compensation was $2.6 million for 2017, $2.3 million for 2016 and $2.3 million for 2015. We determine the fair value of the option awards at the date of grant using a Black-Scholes model. Option pricing models require management to make assumptions and to apply judgment to determine the fair value of the award. These assumptions and judgments include estimating the future volatility of our stock price, expected dividend yield, future employee stock option exercise behaviors and future employee turnover rates. Changes in these assumptions can materially affect the fair value estimate.

Acquisitions

The Company accounts for its acquisitions under ASC Topic 805, *Business Combinations and Reorganizations* ("ASC Topic 805"). ASC Topic 805 provides guidance on how the acquirer recognizes and measures the consideration transferred, identifiable assets acquired, liabilities assumed, non-controlling interests, and goodwill acquired in a business combination. ASC Topic 805 also expands required disclosures surrounding the nature and financial effects of business combinations. Acquisition costs are expensed as incurred. Acquisition related expenses were $0.3 million in 2017, insignificant in 2016, and $0.4 million in 2015.

When the Company acquires a business, we allocate the purchase price to the assets acquired and liabilities assumed in the transaction at their respective estimated fair values. We record any premium over the fair value of net assets acquired as goodwill. The allocation of the purchase price involves judgments and estimates both in characterizing the assets and in determining their fair value. The way we characterize the assets has important implications, as long-lived assets with definitive lives, for example, are depreciated or amortized, whereas goodwill is tested annually for impairment, as explained previously. With respect to determining the fair value of assets, the most subjective estimates involve valuations of long-lived assets, such as property, plant, and equipment as well as identified intangible assets. We use all available information to make these fair value determinations and engage independent valuation specialists to assist in the fair value determination of the acquired long-lived assets. The fair values of long-lived assets are determined using valuation techniques that use discounted cash flow methods, independent market appraisals and other acceptable valuation techniques.

With respect to determining the fair value of the purchase price, the most subjective estimates involve valuations of contingent consideration. Significant judgment is necessary to determine the fair value of the purchase price when the transaction includes an earn-out provision. We engage valuation specialists to assist in the determination of the fair value of contingent consideration. Key assumptions used to value the contingent consideration include future projections and discount rates.

During 2017, acquisitions added approximately $4.0 million in property, plant and equipment and $66.5 million in purchased intangible assets. See Note 18 in the Notes to the Consolidated Financial Statements in Item 8, Financial Statements and Supplementary Data, regarding the acquisitions in 2017.

CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(Dollars in thousands)	2017 (2)	2016	2015 (1)
Sales	$ 624,464	$ 633,123	$ 692,279
Gross Margin	22.0%	25.2%	27.1%
Impairment Loss	$ 16,237	$ —	$ —
SG&A Expenses as a Percentage of Sales	14.5%	13.6%	12.9%
Interest Expense	$ 5,369	$ 4,354	$ 4,751
Effective Tax Rate	21.3%	29.6%	28.8%
Net Income	$ 19,679	$ 48,424	$ 66,974

(1) Our results of operations for 2015 include the operations of Armstrong, beginning January 14, 2015.
(2) Our results of operations for 2017 include the operations of CCC, beginning April 3, 2017, and the operations of CSC, beginning December 1, 2017 ("collectively, the Acquired Businesses").

A discussion by segment can be found at "Segment Results of Operations and Outlook" in this MD&A.

CONSOLIDATED OVERVIEW OF OPERATIONS

2017 Compared With 2016

Consolidated sales for 2017 decreased by $8.7 million, or 1.4%, to $624.5 million. Aerospace segment sales of $534.6 million were consistent with 2016 sales of $534.0 million, while Test Systems segment sales were down 9.3% to $89.9 million. Sales from the Acquired Businesses contributed $15.5 million in 2017.

Consolidated cost of products sold increased $13.7 million to $487.4 million in 2017 from $473.7 million in the prior year. The increase was due primarily to the incremental cost of products sold associated with the Acquired Businesses of $19.8 million, and increased Engineering & Development ("E&D") costs offset by lower organic sales volume. E&D costs increased 6.8% to $95.0 million in 2017 primarily due to the Acquired Businesses, compared with $88.9 million in 2016. The incremental E&D costs of the Acquired Businesses totaled $5.7 million. As a percent of sales, E&D was 15.2% and 14.0% in 2017 and 2016, respectively.

SG&A expenses increased $4.2 million in 2017 compared with 2016. As a percent of sales, SG&A expenses were 14.5% and 13.6% for 2017 and 2016, respectively. The increase was due primarily to the incremental SG&A costs of the Acquired Businesses of $4.6 million, which included $1.8 million of intangible asset amortization expense.

Interest expense increased in 2017 compared to 2016 due primarily to increased debt levels.

2016 Compared With 2015

Consolidated sales for 2016 decreased by $59.2 million, or 8.5%, to $633.1 million, from $692.3 million in 2015. Aerospace segment sales were down 2.9% year-over-year to $534.0 million, while Test Systems segment sales were down 30.5% to $99.1 million.

Consolidated cost of products sold decreased $30.6 million to $473.7 million in 2016 from $504.3 million in the prior year. Lower costs of products sold was the result of lower sales volume and lower warranty expenses. E&D costs were $88.9 million in 2016, consistent with $90.3 million in 2015. As a percent of sales, E&D was 14.0% and 13.0% in 2016 and 2015, respectively.

SG&A expenses were $86.3 million, or 13.6% of sales, in 2016 compared with $89.1 million, or 12.9% of sales, in the same period last year. The decline in SG&A expenses was due primarily to reduced commissions resulting from lower sales volumes. SG&A expenses in 2015 benefited from a $1.8 million write-down of a contingent consideration liability related to an acquisition earn-out obligation.

Interest expense decreased in 2016 compared to 2015 due to decreased debt levels.

Income Taxes

Our effective tax rates for 2017, 2016 and 2015 were 21.3%, 29.6% and 28.8%, respectively. Our tax rate is affected by recurring items, such as tax rates in foreign jurisdictions and the relative amount of income we earn in those jurisdictions, which we expect to be fairly consistent in the near term. It is also affected by discrete items that may occur in any given year, but are not consistent from year to year. In addition to state income taxes, the following items had the most significant impact on the difference between our statutory U.S. federal income tax rate of 35% and our effective tax rate:

2017:

1. Recognition of approximately $2.9 million of 2017 U.S. R&D tax credits.

2. Permanent differences, primarily the impact of the Domestic Production Activities Deduction.

3. Federal tax expense on deemed repatriation of foreign earnings ($1.3 million), partially offset by revaluation of the deferred tax balances ($0.9 million) as a result of a reduction in the Federal tax rate from tax law changes enacted in 2017.

2016:

1. Recognition of approximately $2.6 million of 2016 U.S. R&D tax credits.

2. Permanent differences, primarily the impact of the Domestic Production Activities Deduction.

2015:

1. Recognition of approximately $2.6 million of 2015 U.S. R&D tax credits.

2. Permanent differences, primarily the impact of the Domestic Production Activities Deduction.

2018 Outlook

We expect consolidated sales in 2018 to be between $745.0 million and $815.0 million. Our consolidated backlog at December 31, 2017 was $393.7 million of which approximately $346.7 million is expected to ship in 2018.

We expect our capital equipment spending in 2018 to be in the range of $24.0 million to $28.0 million. E&D spending in 2018 is expected to be in the range of $110.0 million to $115.0 million including the Acquired Businesses, which represents approximately 14.4% of sales at the mid-point of the expected sales range.

SEGMENT RESULTS OF OPERATIONS AND OUTLOOK

Operating profit, as presented below, is sales less cost of products sold and other operating expenses excluding interest expense, corporate expenses and other non-operating revenue and expenses. Cost of products sold and operating expenses are directly attributable to the respective segment. Operating profit is reconciled to earnings before income taxes in Note 17 of Item 8, Financial Statements and Supplementary Data, of this report.

AEROSPACE SEGMENT

(in thousands, except percentages)	2017	2016	2015
Sales	$ 534,603	$ 534,041	$ 549,738
Operating Profit	$ 38,888	$ 77,966	$ 85,103
Operating Margin	7.3%	14.6%	15.5%

	2017	2016
Total Assets	$ 621,047	$ 500,892
Backlog	$ 298,604	$ 219,146

Sales by Market	2017	2016	2015
Commercial Transport	$ 414,523	$ 435,552	$ 455,569
Military	61,270	54,556	43,295
Business Jet	41,298	25,407	32,796
Other	17,512	18,526	18,078
	$ 534,603	$ 534,041	$ 549,738

Sales by Product Line	2017	2016	2015
Electrical Power & Motion	$ 264,286	$ 288,465	$ 279,752
Lighting & Safety	158,663	156,871	157,143
Avionics	53,960	32,761	56,150
Systems Certification	14,333	16,531	21,317
Structures	25,849	20,887	16,372
Other	17,512	18,526	19,004
	$ 534,603	$ 534,041	$ 549,738

2017 Compared With 2016

Aerospace segment sales increased by $0.6 million, or 0.1%, to $534.6 million, when compared with the prior year, primarily due to the addition of the Acquired Businesses which added $15.5 million.

Electrical Power & Motion sales decreased $24.2 million, or 8.4%, due to lower sales of cabin power products due to a combination of lower volume and pricing. Systems Certifications sales decreased $2.2 million and other products decreased $1.0 million from lower project activity. These declines were offset by increased Avionics sales, up $21.2 million of which $15.0 million was from the Acquired Businesses and $5.3 million was from increased sales of databus and in-flight entertainment systems. Structures sales increased by $5.0 million.

Aerospace operating profit for 2017 was $38.9 million, or 7.3% of sales, compared with $78.0 million, or 14.6% of sales, in the same period last year. Aerospace operating profit was negatively impacted by lower sales volume and market pricing pressures primarily related to cabin power products, coupled with the $16.2 million goodwill impairment at Armstrong and an operating loss of $8.4 million from CCC. E&D costs for Aerospace were $85.3 million (inclusive of $5.6 million related to the Acquired Businesses) and $78.5 million in 2017 and 2016, respectively.

2016 Compared With 2015

Aerospace segment sales decreased by $15.7 million, or 2.9%, when compared with the prior year to $534.0 million.

Electrical Power & Motion sales increased $8.7 million, or 3.1%, largely driven by higher sales of in-seat power products and seat motion products, which were up $7.0 million and $4.3 million, respectively. Sales of Structures products were up $4.5 million. These increases were offset by a $23.4 million decline in Avionics products, which was largely due to lower sales of satellite antenna systems and lower VVIP in-flight entertainment/cabin management systems, and a $4.8 million decrease in System Certification sales.

Aerospace operating profit for 2016 was $78.0 million, or 14.6% of sales, compared with $85.1 million, or 15.5% of sales, in the same period last year. The decrease in operating profit was the result of lower sales volume, coupled with slightly higher E&D costs and a general increase in operating costs. E&D costs for Aerospace were $78.5 million and $77.9 million in 2016 and 2015, respectively. Aerospace SG&A expense decreased slightly to $60.0 million in 2016, compared with $60.1 million in 2015.

2018 Outlook for Aerospace – We expect 2018 Aerospace segment sales to be in the range of $630.0 million to $680.0 million. The Aerospace segment's backlog at December 31, 2017 was $298.6 million, compared to $219.1 million at December 31, 2016. Approximately $271.4 million of the backlog at December 31, 2017 is expected to be shipped over the next 12 months.

TEST SYSTEMS SEGMENT

(in thousands, except percentages)	2017	2016	2015
Sales	$ 89,861	$ 99,082	$ 142,541
Operating Profit	$ 7,359	$ 8,507	$ 25,529
Operating Margin	8.2%	8.6%	17.9%

	2017	2016
Total Assets	$ 90,859	$ 76,575
Backlog	$ 95,086	$ 38,887

Sales by Market	2017	2016	2015
Semiconductor	$ 31,999	$ 37,939	$ 92,136
Aerospace & Defense	57,862	61,143	50,405
	$ 89,861	$ 99,082	$ 142,541

2017 Compared With 2016

Sales in 2017 decreased 9.3% to $89.9 million compared with sales of $99.1 million for 2016, due to lower shipments to both the Semiconductor and Aerospace & Defense markets. Sales to the Semiconductor market decreased $5.9 million and sales to the Aerospace & Defense market decreased $3.3 million compared with 2016.

Operating profit was $7.4 million, or 8.2% of sales, compared with $8.5 million, or 8.6% of sales, in 2016. This is primarily due to decreased sales volume. E&D costs were $9.7 million in 2017, compared with $10.4 million in 2016.

2016 Compared With 2015

Sales in 2016 decreased 30.5% to $99.1 million compared with sales of $142.5 million for 2015, due to lower shipments to the Semiconductor market. Sales to the Semiconductor market decreased $54.2 million compared with the same period in 2015, which was partially offset by increased sales of $10.7 million to the Aerospace & Defense market.

Operating profit was $8.5 million, or 8.6% of sales, compared with $25.5 million, or 17.9% of sales, in 2015. E&D costs were $10.4 million in 2016 compared with $12.4 million in the prior year.

2018 Outlook for Test Systems – We expect 2018 Test System segment sales to be in the range of $115.0 million to $135.0 million. The Test System segment's backlog at December 31, 2017 was $95.1 million, compared with $38.9 million at December 31, 2016. Approximately $75.3 million is expected to be shipped over the next 12 months.

OFF BALANCE SHEET ARRANGEMENTS

We do not have material off-balance sheet arrangements that have or are reasonably likely to have a material future effect on our results of operations or financial condition.

CONTRACTUAL OBLIGATIONS

The following table represents contractual obligations as of December 31, 2017:

(In thousands)	Payments Due by Period Total	2018	2019-2020	2021-2022	After 2022
Long-term Debt	$ 271,767	$ 2,689	$ 4,099	$ 2,979	$ 262,000
Purchase Obligations	178,149	173,478	4,671	—	—
Interest on Long-term Debt	45,170	9,244	18,153	17,440	333
Supplemental Retirement Plan and Post Retirement Obligations	26,448	419	833	812	24,384
Operating Leases	6,980	4,141	2,724	115	—
Other Long-term Liabilities	199	83	25	32	59
Total Contractual Obligations	$ 528,713	$ 190,054	$ 30,505	$ 21,378	$ 286,776

Notes to Contractual Obligations Table

Long-term Debt — See Item 8, Financial Statements and Supplementary Data, Note 6, Long-Term Debt and Note Payable in this report. The timing of the payments above consider the amendment to the revolving credit facility as discussed in Note 6.

Interest on Long-term Debt — Future interest payments have been calculated using the applicable interest rate of each debt facility based on actual borrowings as of December 31, 2017. Actual future borrowings and rates may differ from these estimates.

Purchase Obligations — Purchase obligations are comprised of the Company's commitments for goods and services in the normal course of business.

Operating Leases — Operating lease obligations are primarily related to facility leases for AES, AeroSat, Armstrong, ATS, Ballard, CCC, CSC, and LSI Canada.

LIQUIDITY AND CAPITAL RESOURCES

(in thousands)	2017	2016	2015
Net cash provided (used) by:			
Operating Activities	$ 37,783	$ 48,854	$ 78,501
Investing Activities	$ (129,561)	$ (14,622)	$ (73,586)
Financing Activities	$ 91,425	$ (34,806)	$ (6,725)

Our cash flow from operations and available borrowing capacity provide us with the financial resources needed to run our operations and reinvest in our business.

Operating Activities

Cash provided by operating activities was $37.8 million in 2017 compared with $48.9 million in 2016. The decrease of $11.1 million in 2017 was primarily a result of decreased net income and change in net operating assets in 2017 when compared with 2016, coupled with an increased deferred income tax benefit in 2017.

Cash provided by operating activities was $48.9 million in 2016 compared with $78.5 million in 2015. The decrease of $29.6 million in 2016 was primarily a result of decreased net income and net operating assets in 2016 when compared with 2015, partially offset by an increase deferred income tax benefit in 2016.

Cash provided by operating activities was $78.5 million in 2015 compared with $99.9 million in 2014. The decrease of $21.4 million in 2015 was primarily a result of the impact of increases in net operating assets in 2015 when compared with 2014 net of the effects from acquisitions of businesses.

Our cash flows from operations are primarily dependent on our net income adjusted for non-cash expenses and the timing of collections of receivables, level of inventory and payments to suppliers and employees. Sales and operating results of our Aerospace segment are influenced by the build rates of new aircraft, which are subject to general economic conditions, airline passenger travel and spending for government and military programs. Our Test Systems segment depends on capital expenditures of the semiconductor industry which, in turn, depend on current and future demand for those products. A reduction in demand for our customers' products would adversely affect our operating results and cash flows.

Investing Activities

Cash used for investing activities in 2017 was $129.6 million, primarily related to the acquisitions of CCC and CSC of $114.0 million and purchases of property, plant, and equipment ("PP&E") of $13.5 million.

Cash used for investing activities in 2016 was $14.6 million, primarily related to purchases of PP&E of $13.0 million.

Cash used for investing activities in 2015 was $73.6 million. The acquisition of Armstrong used approximately $52.3 million of cash in 2015 and purchases of PP&E used $18.6 million.

Our expectation for 2018 is that we will invest between $24.0 million and $28.0 million for PP&E. Future requirements for PP&E depend on numerous factors, including expansion of existing product lines and introduction of new products. Management believes that our cash flow from operations and current borrowing arrangements will provide for these capital expenditures. We expect to continue to evaluate acquisition opportunities in the future.

Financing Activities

Our ability to maintain sufficient liquidity is highly dependent upon achieving expected operating results. Failure to achieve expected operating results could have a material adverse effect on our liquidity, our ability to obtain financing, and our operations in the future.

The Company's Fourth Amended and Restated Credit Agreement (the "Original Facility") provided for a $350 million revolving credit line with the option to increase the line by up to $150 million. The maturity date of the loans under the Original Facility was September 26, 2019. The credit facility allocates up to $20 million of the $500 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2017, outstanding letters of credit totaled $1.1 million.

On January 13, 2016, the Company amended the Original Facility to add a new lender and extend the maturity date of the credit facility from September 26, 2019 to January 13, 2021.

The maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) was 3.5 to 1, increasing to 4.0 to 1 for up to two fiscal quarters following the closing of an acquisition permitted under the Agreement. The Company paid interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.375% and 2.25% based upon the Company's leverage ratio. The Company paid a commitment fee to the Lenders in an amount equal to between 0.175% and 0.35% on the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company was required to maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement.

On February 16, 2018, the Company modified and extended the Original Facility by entering into the Fifth Amended and Restated Credit Agreement (the "Agreement"), which provides for a $500 million revolving credit line with the option to increase the line by up to $150 million. A new lender was added to the facility as well. The outstanding balances in the Original Facility were rolled into the Agreement on the date of closing. The maturity date of the loans under the Agreement is February 16, 2023.

Covenants in the Agreement have been modified to where the maximum permitted leverage ratio is 3.75 to 1 beginning with quarters ended on or after December 31, 2017. However, the Company may elect to exercise its right to increase this ratio to 4.50 to 1 or up to four fiscal quarters following the closing of an acquisition permitted under the Agreement, subject to limitations. The Company will pay interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.00% and 1.50% based upon the Company's leverage ratio. The Company will also pay a commitment fee to the Lenders in an amount equal to between 0.10% and 0.20% of the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company's leverage ratio was 2.91 to 1 at December 31, 2017. The Company is in compliance with all financial and other covenants at December 31, 2017. The requirement to maintain a minimum interest coverage ratio has been eliminated.

The Company’s obligations under the Credit Agreement as amended are jointly and severally guaranteed by each domestic subsidiary of the Company other than a non-material subsidiary. The obligations are secured by a first priority lien on substantially all of the Company’s and the guarantors’ assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Credit Agreement automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the Agent the option to declare all such amounts immediately due and payable.

The primary financing activities in 2017 related to net borrowings from our senior facility of $126.0 million and $32.4 million in share repurchases under our original Buyback Program, as further described below, using cash generated from operations. The primary financing activities in 2016 related to net repayments on our senior facility of $19.0 million and $17.6 million in share repurchases under our original Buyback Program, using cash generated from operations.The primary financing activities in 2015 relate to borrowings on our senior credit facility to fund the acquisition of Armstrong and voluntary principal payments against our outstanding balance on the senior facility. We borrowed $50.0 million to fund the acquisition of Armstrong. During 2015, we made principal payments of $65.0 million on the senior credit facility, primarily using cash generated by operations.

The Company’s cash needs for working capital, debt service and capital equipment during 2018 is expected to be met by cash flows from operations and cash balances and, if necessary, utilization of the revolving credit facility.

On February 24, 2016, the Company’s Board of Directors authorized the repurchase of up to $50 million of common stock (the “Buyback Program”). The Buyback Program allowed the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Company has repurchased approximately 1,675,000 shares and has completed that program. On December 12, 2017, the Company’s Board of Directors authorized an additional repurchase of up to $50 million of common stock. No amounts have been repurchased under the new program as of December 31, 2017.

DIVIDENDS

Management believes that it should retain the capital generated from operating activities for investment in advancing technologies, acquisitions and debt retirement. Accordingly, there are no plans to institute a cash dividend program.

BACKLOG

At December 31, 2017, the Company’s backlog was approximately $393.7 million compared with approximately $258.0 million at December 31, 2016.

RELATED-PARTY TRANSACTIONS

Information regarding certain relationships and related transactions is incorporated herein by reference to the information included in the Company’s 2018 Proxy Statement which will be filed with the Commission within 120 days after the end of the Company’s 2017 fiscal year.

RECENT ACCOUNTING PRONOUNCEMENTS

See Note 1 of the Consolidated Financial Statements at Item 8 of this report.

ITEM 7A. ***QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK***

The Company has limited exposure to fluctuation in Canadian and Euro currency exchange rates to the U.S. dollar. Over 90% of the Company’s consolidated sales are transacted in U.S. dollars. Net assets held in or measured in Canadian dollars amounted to $14.6 million at December 31, 2017. Annual disbursements transacted in Canadian dollars were approximately $8.4 million in 2017. A 10% change in the value of the U.S. dollar versus the Canadian dollar would have had a $0.2 million impact to 2017 net income; however it could be significant in the future. Net assets held in or measured in Euros amounted to $32.8 million at December 31, 2017. Disbursements transacted in Euros in 2017 were approximately $33.7 million. A 10% change in the value of the U.S. dollar versus the Euros would have had a $0.8 million impact to 2017 net income; however it could be significant in the future. Risk due to fluctuation in interest rates is a function of the Company’s floating rate debt obligations, which total approximately $262.0 million at December 31, 2017. A change of 1% in interest rates of all variable rate debt would impact annual net income by approximately $2.6 million, before income taxes.

ITEM 8. ***FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA***

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Astronics Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Astronics Corporation (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income, cash flows, and shareholders' equity for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with US generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include 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. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1992.

Buffalo, New York
February 28, 2018

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2017 based upon the framework in Internal Control – Integrated Framework originally issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, our management concluded that our internal control over financial reporting is effective as of December 31, 2017.

We completed acquisitions in 2017, which were excluded from our management's report on internal control over financial reporting as of December 31, 2017. We acquired Astronics Custom Control Concepts, Inc. on April 3, 2017 and Astronics Connectivity Systems and Certification Corporation on December 1, 2017. These acquisitions were included in our 2017 consolidated financial statements and constituted $127.9 million and $114.4 million of total and net assets, respectively, as of December 31, 2017 and $15.5 million and ($6.9) million of sales and net loss, respectively, for the year then ended.

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, on the effectiveness of our internal control over financial reporting.

By:	/s/ Peter J. Gundermann	February 28, 2018
	Peter J. Gundermann President & Chief Executive Officer (Principal Executive Officer)	
	/s/ David C. Burney	February 28, 2018
	David C. Burney Executive Vice President and Chief Financial Officer (Principal Financial Officer)	

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Astronics Corporation

Opinion on Internal Control over Financial Reporting

We have audited Astronics Corporation's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Astronics Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Astronics Custom Control Concepts Inc. and Astronics Connectivity Systems and Certification Corporation, which are included in the 2017 consolidated financial statements of the Company and constituted \$127.9 million and \$114.4 million of total and net assets, respectively, as of December 31, 2017 and \$15.5 million and (\$6.9) million of revenues and net loss, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Astronics Custom Control Concepts Inc. and Astronics Connectivity Systems and Certification Corporation.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statement of operations, comprehensive income, cash flows, and shareholders' equity for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated February 28, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

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

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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Buffalo, New York
February 28, 2018

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Year Ended December 31, 2017	2016	2015
Sales	$ 624,464	$ 633,123	$ 692,279
Cost of Products Sold	487,351	473,656	504,337
Gross Profit	137,113	159,467	187,942
Impairment Loss	16,237	—	—
Selling, General and Administrative Expenses	90,516	86,328	89,141
Income from Operations	30,360	73,139	98,801
Interest Expense, Net of Interest Income	5,369	4,354	4,751
Income Before Income Taxes	24,991	68,785	94,050
Provision for Income Taxes	5,312	20,361	27,076
Net Income	$ 19,679	$ 48,424	$ 66,974
Basic Earnings Per Share	$ 0.69	$ 1.66	$ 2.29
Diluted Earnings Per Share	$ 0.67	$ 1.61	$ 2.22

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)	Year Ended December 31, 2017	2016	2015
Net Income	$ 19,679	$ 48,424	$ 66,974
Other Comprehensive Income (Loss):			
Foreign Currency Translation Adjustments	4,132	(626)	(4,617)
Retirement Liability Adjustment – Net of Tax	(1,990)	196	1,502
Other Comprehensive Income (Loss)	2,142	(430)	(3,115)
Comprehensive Income	$ 21,821	$ 47,994	$ 63,859

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data)	December 31, 2017	December 31, 2016
ASSETS		
Current Assets:		
Cash and Cash Equivalents	$ 17,914	$ 17,901
Accounts Receivable, Net of Allowance for Doubtful Accounts	132,633	109,415
Inventories	150,196	116,597
Prepaid Expenses and Other Current Assets	14,586	11,160
Total Current Assets	315,329	255,073
Property, Plant and Equipment, at Cost:		
Land	11,237	11,112
Buildings and Improvements	81,872	79,191
Machinery and Equipment	105,827	93,683
Construction in Progress	9,761	8,182
	208,697	192,168
Less Accumulated Depreciation	82,867	69,356
Net Property, Plant and Equipment	125,830	122,812
Other Assets	15,659	13,149
Intangible Assets, Net of Accumulated Amortization	153,493	98,103
Goodwill	125,645	115,207
Total Assets	$ 735,956	$ 604,344
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Current Maturities of Long-term Debt	$ 2,689	$ 2,636
Accounts Payable	41,846	25,070
Accrued Payroll and Employee Benefits	24,890	24,743
Accrued Income Taxes	261	62
Other Accrued Expenses	13,598	10,881
Customer Advanced Payments and Deferred Revenue	19,607	23,168
Total Current Liabilities	102,891	86,560
Long-term Debt	269,078	145,484
Supplemental Retirement Plan and Other Liabilities for Pension Benefits	26,030	22,140
Other Liabilities	2,909	1,414
Deferred Income Taxes	5,121	11,297
Total Liabilities	406,029	266,895
Shareholders' Equity:		
Common Stock, $.01 par value, Authorized 40,000,000 Shares 22,860,742 Shares Issued and 21,186,028 Outstanding at December 31, 2017 21,955,414 Shares Issued and 21,432,282 Outstanding at December 31, 2016	229	220
Convertible Class B Stock, $.01 par value, Authorized 15,000,000 Shares 6,852,309 Shares Issued and Outstanding at December 31, 2017 7,665,437 Shares Issued and Outstanding at December 31, 2016	68	77
Additional Paid-in Capital	67,791	64,752
Accumulated Other Comprehensive Loss	(13,352)	(15,494)
Retained Earnings	325,191	305,512
Treasury Stock; 1,674,714 Shares at December 31, 2017, 532,132 Shares at December 31, 2016	(50,000)	(17,618)
Total Shareholders' Equity	329,927	337,449
Total Liabilities and Shareholders' Equity	$ 735,956	$ 604,344

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Year Ended December 31, 2017	2016	2015
Cash Flows from Operating Activities			
Net Income	$ 19,679	$ 48,424	$ 66,974
Adjustments to Reconcile Net Income to Cash Provided By Operating Activities, Excluding the Effects of Acquisitions:			
Impairment Loss	16,237	—	—
Depreciation and Amortization	27,063	25,790	25,309
Provision for Non-Cash Losses on Inventory and Receivables	2,973	2,404	3,187
Stock Compensation Expense	2,598	2,281	2,274
Deferred Tax Benefit	(5,494)	(4,756)	(252)
Non-cash Adjustment to Contingent Consideration	—	—	(1,751)
Other	(937)	165	(294)
Cash Flows from Changes in Operating Assets and Liabilities, net of the Effects from Acquisitions of Businesses:			
Accounts Receivable	(9,844)	(14,622)	(729)
Inventories	(18,116)	(2,671)	(2,537)
Prepaid Expenses and Other Current Assets	(2,132)	108	(799)
Accounts Payable	10,439	(2,000)	(2,168)
Accrued Expenses	(702)	(174)	3,738
Income Taxes Payable	(376)	7,926	(9,266)
Customer Advanced Payments and Deferred Revenue	(4,918)	(15,539)	(7,485)
Supplemental Retirement Plan and Other Liabilities	1,313	1,518	2,300
Cash Provided By Operating Activities	37,783	48,854	78,501
Cash Flows from Investing Activities			
Acquisitions of Business, Net of Cash Acquired	(114,039)	—	(52,276)
Capital Expenditures	(13,478)	(13,037)	(18,641)
Other	(2,044)	(1,585)	(2,669)
Cash Used For Investing Activities	(129,561)	(14,622)	(73,586)
Cash Flows from Financing Activities			
Proceeds From Long-term Debt	147,086	20,000	55,000
Principal Payments on Long-term Debt	(23,720)	(41,835)	(67,694)
Purchase of Outstanding Shares for Treasury	(32,382)	(17,618)	—
Proceeds from Exercise of Stock Options	441	3,813	2,996
Excess Tax Benefit from Exercise of Stock Options	—	834	2,973
Cash Provided by (Used for) Financing Activities	91,425	(34,806)	(6,725)
Effect of Exchange Rates on Cash	366	(86)	(826)
Increase (Decrease) in Cash and Cash Equivalents	13	(660)	(2,636)
Cash and Cash Equivalents at Beginning of Year	17,901	18,561	21,197
Cash and Cash Equivalents at End of Year	$ 17,914	$ 17,901	$ 18,561
Supplemental Cash Flow Information:			
Interest Paid	$ 4,775	$ 4,536	$ 4,734
Income Taxes Paid, Net of Refunds	$ 10,777	$ 15,898	$ 32,990

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Year Ended December 31, 2017	2016	2015
Common Stock			
Beginning of Year	$ 220	$ 194	$ 166
Exercise of Stock Options and Stock Compensation Expense – Net of Taxes	—	1	2
Class B Stock Converted to Common Stock	9	25	26
End of Year	$ 229	$ 220	$ 194
Convertible Class B Stock			
Beginning of Year	$ 77	$ 100	$ 124
Exercise of Stock Options and Stock Compensation Expense – Net of Taxes	—	2	2
Class B Stock Converted to Common Stock	(9)	(25)	(26)
End of Year	$ 68	$ 77	$ 100
Additional Paid in Capital			
Beginning of Year	$ 64,752	$ 57,827	$ 49,588
Exercise of Stock Options and Stock Compensation Expense - Net of Taxes	3,039	6,925	8,239
End of Year	$ 67,791	$ 64,752	$ 57,827
Accumulated Other Comprehensive Loss			
Beginning of Year	$ (15,494)	$ (15,064)	$ (11,949)
Foreign Currency Translation Adjustments	4,132	(626)	(4,617)
Retirement Liability Adjustment – Net of Taxes	(1,990)	196	1,502
End of Year	$ (13,352)	$ (15,494)	$ (15,064)
Retained Earnings			
Beginning of Year	$ 305,512	$ 257,168	$ 190,248
Net income	19,679	48,424	66,974
Cash Paid in Lieu of Fractional Shares from Stock Distribution	—	(80)	(54)
End of Year	$ 325,191	$ 305,512	$ 257,168
Treasury Stock			
Beginning of Year	$ (17,618)	$ —	$ —
Purchase of Shares	(32,382)	(17,618)	—
End of Year	$ (50,000)	$ (17,618)	$ —
Total Shareholders' Equity	$ 329,927	$ 337,449	$ 300,225

See notes to consolidated financial statements

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY, COUNTINUED

(Share data, in thousands)	Year Ended December 31, 2017	2016	2015
Common Stock			
Beginning of Year	21,955	19,349	16,608
Exercise of Stock Options	26	151	168
Class B Stock Converted to Common Stock	880	2,455	2,573
End of Year	22,861	21,955	19,349
Convertible Class B Stock			
Beginning of Year	7,665	10,055	12,447
Exercise of Stock Options	67	65	181
Class B Stock Converted to Common Stock	(880)	(2,455)	(2,573)
End of Year	6,852	7,665	10,055
Treasury Stock			
Beginning of Year	523	—	—
Purchase of Shares	1,152	523	—
End of Year	1,675	523	—

See notes to consolidated financial statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 — SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES AND PRACTICES

Description of the Business

Astronics Corporation ("Astronics" or the "Company") is a leading provider of advanced technologies to the global aerospace, defense, electronics and semiconductor industries. Our products and services include advanced, high-performance electrical power generation, distribution and motion systems, lighting and safety systems, avionics products, systems certification, aircraft structures and automated test systems.

We have operations in the United States ("U.S."), Canada and France. We design and build our products through our wholly owned subsidiaries Astronics Advanced Electronic Systems Corp. ("AES"); Astronics AeroSat Corporation ("AeroSat"); Armstrong Aerospace, Inc. ("Armstrong"); Astronics Test Systems, Inc. ("ATS"); Ballard Technology, Inc. ("Ballard"); Astronics Connectivity Systems and Certification Corp. ("CSC"); Astronics Custom Control Concepts Inc. ("CCC"); Astronics DME LLC ("DME"); Luminescent Systems, Inc. ("LSI"); Luminescent Systems Canada, Inc. ("LSI Canada"); Max-Viz, Inc. ("Max-Viz"); Peco, Inc. ("Peco"); and PGA Electronic s.a. ("PGA").

At December 31, 2017, the Company has two reportable segments, Aerospace and Test Systems. The Aerospace segment designs and manufactures products for the global aerospace industry. Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the semiconductor, aerospace, communications and weapons test systems as well as training and simulation devices for both commercial and military applications.

On January 14, 2015, the Company acquired 100% of the equity of Armstrong for approximately $52.3 million in cash. Armstrong, located in Itasca, Illinois, is a leading provider of engineering, design and certification solutions for commercial aircraft, specializing in connectivity, in-flight entertainment, and electrical power systems. Armstrong is included in our Aerospace segment.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC, located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately $10.2 million, net of $0.5 million in cash acquired. CCC is included in our Aerospace segment.

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company Product Development Technologies, LLC and its subsidiaries, to become CSC, located in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. Under the terms of the Agreement, the total consideration for the transaction was approximately $103.8 million, net of $0.2 million in cash acquired. CSC is included in our Aerospace Segment.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany transactions and balances have been eliminated.

Acquisitions are accounted for under the acquisition method and, accordingly, the operating results for the acquired companies are included in the consolidated statements of operations from the respective dates of acquisition.

For additional information on the acquired businesses, see Note 18.

Revenue Recognition

The vast majority of our sales agreements are for standard products and services, with revenue recognized on the accrual basis at the time of shipment of goods, transfer of title and customer acceptance, where required. There are no significant contracts allowing for right of return. To a limited extent at ATS, certain contracts involve multiple elements (such as equipment and service). Service revenues were not material for the years ended December 31, 2017, 2016 and 2015. The Company recognizes revenue for delivered elements when they have stand-alone value to the customer, they have been accepted by the customer, and for which there are only customary refund or return rights. Arrangement consideration is allocated to the deliverables by use of the relative selling price method. The selling price used for each deliverable is based on vendor-specific objective evidence ("VSOE") if available, third party-evidence ("TPE") if VSOE is not available, or estimated selling price if neither

VSOE nor TPE is available. Estimated selling price is determined in a manner consistent with that used to establish the price to sell the deliverable on a standalone basis.

For prepaid service contracts, sales revenue is recognized on a straight-line basis over the term of the contract, unless historical evidence indicates the costs are incurred on other than a straight-line basis.

Revenue of approximately $21.0 million, $20.7 million and $17.2 million for the years ended December 31, 2017, 2016 and 2015, respectively, was recognized from long-term, fixed-price contracts using the percentage-of-completion method of accounting, measured by multiplying the estimated total contract value by the ratio of actual contract costs incurred to date to the estimated total contract costs. The Company makes significant estimates involving its usage of percentage-of-completion accounting to recognize contract revenues. The Company periodically reviews contracts in process for estimates-to-completion, and revises estimated gross profit accordingly. While the Company believes its estimated gross profit on contracts in process is reasonable, unforeseen events and changes in circumstances can take place in a subsequent accounting period that may cause the Company to revise its estimated gross profit on one or more of its contracts in process. Accordingly, the ultimate gross profit realized upon completion of such contracts can vary significantly from estimated amounts between accounting periods. For contracts with anticipated losses at completion, a charge is taken against income for the amount of the entire loss in the period in which it is estimated.

Cost of Products Sold, Engineering and Development and Selling, General and Administrative Expenses

Cost of products sold includes the costs to manufacture products such as direct materials and labor and manufacturing overhead as well as all engineering and developmental costs. The Company is engaged in a variety of engineering and design activities as well as basic research and development activities directed to the substantial improvement or new application of the Company's existing technologies. These costs are expensed when incurred and included in cost of products sold. Research and development, design and related engineering amounted to $95.0 million in 2017, $88.9 million in 2016 and $90.3 million in 2015. Selling, general and administrative ("SG&A") expenses include costs primarily related to our sales, marketing and administrative departments. Interest expense is shown net of interest income. Interest income was insignificant for the years ended December 31, 2017, 2016 and 2015.

Shipping and Handling

Shipping and handling costs are expensed as incurred and are included in costs of products sold.

Equity-Based Compensation

The Company accounts for its stock options following Accounting Standards Codification ("ASC") Topic 718, *Compensation – Stock Compensation* ("ASC Topic 718"). This Topic requires all equity-based payments to employees, including grants of employee stock options, to be recognized in the statement of earnings based on the grant date fair value of the award. For awards with graded vesting, the Company uses a straight-line method of attributing the value of stock-based compensation expense, subject to minimum levels of expense, based on vesting.

Under ASC Topic 718, stock compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Vesting requirements vary for directors, officers and key employees. In general, options granted to outside directors vest six months from the date of grant and options granted to officers and key employees vest with graded vesting over a five-year period, 20% each year, from the date of grant.

Cash and Cash Equivalents

All highly liquid instruments with a maturity of three months or less at the time of purchase are considered cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are composed of trade and contract receivables recorded at either the invoiced amount or costs in excess of billings, are expected to be collected within one year, and do not bear interest. The Company will record a valuation allowance to account for potentially uncollectible accounts receivable. The allowance is determined based on our knowledge of the business, specific customers, review of the receivables' aging and a specific identification of accounts where collection is at risk. Account balances are charged against the allowance after all means of collections have been exhausted and recovery is considered remote. The Company typically does not require collateral.

Inventories

We record our inventories at the lower of cost or net realizable value. We determine the cost basis of our inventory on a first-in, first-out or weighted average basis using a standard cost methodology that approximates actual cost. The Company records valuation reserves to provide for excess, slow moving or obsolete inventory. In determining the appropriate reserve, the Company considers the age of inventory on hand, the overall inventory levels in relation to forecasted demands as well as reserving for specifically identified inventory that the Company believes is no longer salable.

Precontract Costs

The Company may, from time to time, incur costs in excess of the amounts required for existing contracts. If it is determined the costs are probable of recovery from future orders, the precontract costs incurred are capitalized, excluding start-up costs which are expensed as incurred. Capitalized precontract costs are included in Inventories in the accompanying Consolidated Balance Sheets. Should future orders not materialize or it is determined the costs are no longer probable of recovery, the capitalized costs are written off. Included in inventories at December 31, 2017 are capitalized precontract costs of $7.0 million.

Property, Plant and Equipment

Depreciation of property, plant and equipment is computed using the straight-line method for financial reporting purposes and using accelerated methods for income tax purposes. Estimated useful lives of the assets are as follows: buildings, 25-40 years; machinery and equipment, 4-10 years. Leased buildings and associated leasehold improvements are amortized over the shorter of the terms of the lease or the estimated useful lives of the assets, with the amortization of such assets included within depreciation expense.

The cost of properties sold or otherwise disposed of and the accumulated depreciation thereon are eliminated from the accounts and the resulting gain or loss, as well as maintenance and repair expenses, is reflected within operating income. Replacements and improvements are capitalized.

Depreciation expense was approximately $14.1 million, $14.3 million and $13.3 million in 2017, 2016 and 2015, respectively.

Buildings acquired under capital leases amounted to $10.3 million ($15.5 million, net of $5.2 million of accumulated amortization) and $10.5 million ($14.3 million, net of $3.8 million accumulated amortization) at December 31, 2017 and 2016, respectively. Future minimum lease payments associated with these capital leases are expected to be $2.7 million in 2018, $2.0 million in 2019, $2.1 million in 2020, $2.2 million in 2021 and $0.9 million in 2022.

Long-Lived Assets

Long-lived assets to be held and used are initially recorded at cost. The carrying value of these assets is evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying amount may not be recoverable. Impairments are recognized if future undiscounted cash flows from operations are not expected to be sufficient to recover long-lived assets. The carrying amounts are then reduced to fair value, which is typically determined by using a discounted cash flow model.

Goodwill

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. The Company has twelve reporting units, however only nine reporting units have goodwill and were subject to the goodwill impairment test as of the first day of our fourth quarter.

We may elect to perform a qualitative assessment that considers economic, industry and company-specific factors for all or selected reporting units. If, after completing the assessment, it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we proceed to a quantitative test. We may also elect to perform a quantitative test instead of a qualitative test for any or all of our reporting units.

Quantitative testing requires a comparison of the fair value of each reporting unit to its carrying value. We use the discounted cash flow method to estimate the fair value of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected revenue growth rates, operating margins and cash flows, the terminal growth rate and the weighted average cost of capital. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and any loss must be measured. We adopted ASU No. 2017-04 on January 1, 2017. Accordingly, goodwill impairment is measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill.

As a result of this assessment, the Company recorded an impairment charge of approximately $16.2 million in the December 31, 2017 consolidated statement of operations associated to the Armstrong reporting unit. The impairment loss was incurred in the Aerospace segment and is reported on the Impairment Loss line of the Consolidated Statements of Operations. There were no impairment charges in 2016 or 2015. None of this loss related to goodwill is immediately deductible for tax purposes. The majority of goodwill is expensed over 15 years for tax purposes.

Intangible Assets

Acquired intangibles are generally valued based upon future economic benefits such as earnings and cash flows. Acquired identifiable intangible assets are recorded at fair value and are amortized over their estimated useful lives. Acquired intangible assets with an indefinite life are not amortized, but are reviewed for impairment at least annually or more frequently whenever events or changes in circumstances indicate that the carrying amounts of those assets are below their estimated fair values.

Impairment is tested under ASC Topic 350, *Intangibles - Goodwill and Other,* as amended by Accounting Standards Update (“ASU”) 2012-2, by first performing a qualitative analysis in a manner similar to the testing methodology of goodwill discussed previously. The qualitative factors applied under this new provision indicated no impairment to the Company’s indefinite lived intangible assets in 2017, 2016 or 2015.

Financial Instruments

The Company’s financial instruments consist primarily of cash and cash equivalents, accounts receivable, accounts payable, notes payable and long-term debt. The Company performs periodic credit evaluations of its customers’ financial condition and generally does not require collateral. The Company does not hold or issue financial instruments for trading purposes. Due to their short-term nature, the carrying values of cash and equivalents, accounts receivable, accounts payable, and notes payable approximate fair value. The carrying value of the Company’s variable rate long-term debt instruments also approximates fair value due to the variable rate feature of these instruments.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities and the reported amounts of revenues and expenses during the reporting periods in the financial statements and accompanying notes. Actual results could differ from those estimates.

Foreign Currency Translation

The Company accounts for its foreign currency translation in accordance with ASC Topic 830, *Foreign Currency Translation*. The aggregate transaction gain included in operations was insignificant in 2017 and 2016, and $1.0 million in 2015.

Dividends

The Company has not paid any cash dividends in the three-year period ended December 31, 2017.

Loss Contingencies

Loss contingencies may from time to time arise from situations such as claims and other legal actions. Loss contingencies are recorded as liabilities when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable. Disclosure is required when there is a reasonable possibility that the ultimate loss will exceed the recorded provision. Contingent liabilities are often resolved over long time periods. In recording liabilities for probable losses, management is required to make estimates and judgments regarding the amount or range of the probable loss. Management continually assesses the adequacy of estimated loss contingencies and, if necessary, adjusts the amounts recorded as better information becomes known.

Acquisitions

The Company accounts for its acquisitions under ASC Topic 805, *Business Combinations and Reorganizations* ("ASC Topic 805"). ASC Topic 805 provides guidance on how the acquirer recognizes and measures the consideration transferred, identifiable assets acquired, liabilities assumed, non-controlling interests, and goodwill acquired in a business combination. ASC Topic 805 also expands required disclosures surrounding the nature and financial effects of business combinations. See Note 18 regarding the acquisitions in 2017 and 2015.

Newly Adopted and Recent Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* ("Topic 606"), that, together with several subsequent updates, outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance. Topic 606 is based on the principle that an entity should recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Topic 606 also provides for enhanced disclosure requirements surrounding revenue recognition beginning with the reporting period ending March 31, 2018 and we are currently preparing our responsive disclosures.

Revenue on a significant portion of our contracts is currently recognized at the time of shipment of goods, transfer of title and customer acceptance, as required. Our revenue transactions generally consist of a single performance obligation to transfer promised goods and are not accounted for under industry-specific guidance. We have obtained an understanding of the new standard and currently believe that we will retain much of the same accounting treatment used to recognize revenue under current standards. However, the adoption of this guidance will require us to accelerate the recognition of revenue as compared to current standards, for certain customers, in cases where we produce products unique to those customers; and for which we would have an enforceable right of payment for production completed to date.

We have evaluated the impact of ASU No. 2014-09 on our financial results and will adopt this standard using the modified retrospective method, which requires the recognition of the cumulative effect of the transition as an adjustment to retained earnings for open contracts as of January 1, 2018. Based on the application of the changes described above, we expect to recognize a transition adjustment of no more than $10 million, net of tax effects, which will increase our January 1, 2018 retained earnings. Based on our existing operations, ASU No. 2014-09 is not expected to have a material impact to net earnings for the year ended December 31, 2018.

In February 2016, the FASB issued ASU No. 2016 - 02, *Leases*. The new standard is effective for reporting periods beginning after December 15, 2018. Early adoption is permitted. The standard will require lessees to report most leases as assets and liabilities on the balance sheet, while lessor accounting will remain substantially unchanged. The standard requires a modified retrospective transition approach for existing leases, whereby the new rules will be applied to the earliest year presented. The Company is currently evaluating the impact of ASU 2016-02 on our financial statements.

On January 1, 2017, the Company adopted ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*. Prospectively, beginning January 1, 2017, excess tax benefits/deficiencies are reflected as income tax benefit/expense in the statement of income, resulting in a $0.5 million tax benefit for the year ended December 31, 2017. The extent of excess tax benefits/deficiencies is subject to variation in the Company's stock price and timing/extent of employee stock option exercises. Under previous accounting guidance, when a share-based payment award such as a stock option was granted to an employee, the fair value of the award was generally recognized over the vesting period. However, the related deduction from taxes payable was based on the award's intrinsic value at the time of exercise, which could be either greater (creating an excess tax benefit) or less (creating a tax deficiency) than the compensation cost recognized in the financial statements. Excess tax benefits were recognized in additional paid-in capital ("APIC") within equity, while deficiencies were first recorded to APIC to the extent previously recognized excess tax benefits existed, after which time deficiencies were recorded to income tax expense. The Company's adoption of this ASU also resulted in associated excess tax benefits being classified as an operating activity in the same manner as other cash flows related to income taxes in the statement of cash flows prospectively beginning January 1, 2017. Based on the adoption methodology applied, the statement of cash flows classification of prior periods has not changed. As permitted by the ASU, the Company has elected to account for forfeitures as they occur. None of the other provisions in this amended guidance had a significant impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments,* which is intended to reduce diversity in practice in how certain cash receipts and payments are presented and classified in the statement of cash flows. The standard provides guidance in a number of situations including, among others, settlement of zero-coupon bonds, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, and distributions received from equity method investees. The ASU also provides guidance for classifying cash receipts and payments that have aspects of more than one class of cash flows. The Company early adopted ASU No. 2016-15 as of January 1, 2017. There were no changes in classification to prior periods presented, and thus no impact was reflected in the Company's consolidated results of operations and financial condition presented.

In January 2017, the FASB issued ASU No. 2017-01, *Clarifying the Definition of a Business*, which narrows the existing definition of a business and provides a framework for evaluating whether a transaction should be accounted for as an acquisition (or disposal) of assets or a business. The ASU requires an entity to evaluate if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets; if so, the set of transferred assets and activities (collectively, the set) is not a business. To be considered a business, the set would need to include an input and a substantive process that together significantly contribute to the ability to create outputs. The standard also narrows the definition of outputs. The definition of a business affects areas of accounting such as acquisitions, disposals and goodwill. Under the new guidance, fewer acquired sets are expected to be considered businesses. This ASU is effective for fiscal years beginning after December 15, 2017 on a prospective basis with early adoption permitted. The Company would apply this guidance to applicable transactions after the adoption date.

In January 2017, the FASB issued ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment*. Under the new standard, goodwill impairment would be measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill. This ASU eliminates existing guidance that requires an entity to determine goodwill impairment by calculating the implied fair value of goodwill by hypothetically assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. This ASU is effective prospectively to annual and interim impairment tests beginning after December 15, 2019, with early adoption permitted. The Company early adopted ASU 2017-04 on January 1, 2017. Accordingly, any goodwill impairment losses from that date forward are measured under the provisions of ASU 2017-04.

In March 2017, the FASB issued ASU No. 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This ASU changes how employers that sponsor defined benefit pension and/or other postretirement benefit plans present the net periodic benefit cost in the income statement. Under the new standard, only the service cost component of net periodic benefit cost would be included in operating expenses. All other net periodic benefit costs components (such as interest cost, prior service cost amortization and actuarial gain/loss amortization) would be reported outside of operating income. This ASU is effective January 1, 2018 on a retrospective basis. The components of the Company's net periodic defined benefit pension and postretirement benefit costs are presented in Note 10. These include components totaling $1.7 million, $1.7 million and $1.9 million, for the years ended December 31, 2017, 2016, and 2015, respectively, that would no longer be included within operating expenses and instead would be reported outside of income from operations under the new standard.

In May 2017, the FASB issued ASU No. 2017-09*, Scope of Modification Accounting*, that clarifies when changes to the terms or conditions of a share-based payment award must be accounted for as a modification. The general model for accounting for modifications of share-based payment awards is to record the incremental value arising from the changes as additional compensation cost. Under the new standard, fewer changes to the terms of an award would require accounting under this modification model. This ASU is effective January 1, 2018, with early adoption permitted. Because the Company does not typically make changes to the terms or conditions of its issued share-based payment awards, this ASU is not expected to have a material impact on its consolidated results of operations and financial condition.

NOTE 2 — ACCOUNTS RECEIVABLE

Accounts receivable at December 31 consists of:

(In thousands)	2017	2016
Trade Accounts Receivable	$ 114,461	$ 93,823
Unbilled Recoverable Costs and Accrued Profits	19,132	16,194
Total Receivables	133,593	110,017
Less Allowance for Doubtful Accounts	(960)	(602)
	$ 132,633	$ 109,415

NOTE 3 — INVENTORIES

Inventories at December 31 are as follows:

(In thousands)	2017	2016
Finished Goods	$ 35,193	$ 28,792
Work in Progress	33,219	20,790
Raw Material	81,784	67,015
	$ 150,196	$ 116,597

At December 31, 2017, the Company's reserve for inventory valuation was $18.0 million, or 10.7% of gross inventory. At December 31, 2016, the Company's reserve for inventory valuation was $15.4 million, or 11.7% of gross inventory.

NOTE 4 — INTANGIBLE ASSETS

The following table summarizes acquired intangible assets as follows:

		December 31, 2017		December 31, 2016	
(In thousands)	Weighted Average Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	11 Years	$ 2,146	$ 1,629	$ 2,146	$ 1,450
Non-compete Agreement	4 Years	10,900	1,687	2,500	979
Trade Names	10 Years	11,492	4,114	10,189	3,153
Completed and Unpatented Technology	10 Years	38,114	11,931	24,118	9,221
Backlog	2 Years	14,424	12,184	11,224	11,224
Customer Relationships	16 Years	137,967	30,005	97,046	23,093
Total Intangible Assets	13 Years	$ 215,043	$ 61,550	$ 147,223	$ 49,120

Amortization is computed on the straight-line method for financial reporting purposes, with the exception of backlog, which is amortized based on the expected realization period of the acquired backlog. Amortization expense for intangibles was $12.3 million, $10.8 million and $11.3 million for 2017, 2016 and 2015, respectively.

Based upon acquired intangible assets at December 31, 2017, amortization expense for each of the next five years is estimated to be:

(In thousands)	
2018	$ 19,354
2019	$ 16,700
2020	$ 15,975
2021	$ 14,065
2022	$ 13,631

NOTE 5 — GOODWILL

The following table summarizes the changes in the carrying amount of goodwill for 2017 and 2016:

(In thousands)	2017	2016
Balance at Beginning of the Year	$ 115,207	$ 115,369
Acquisition	25,740	—
Impairment Charge	(16,237)	—
Foreign Currency Translations and Other	935	(162)
Balance at End of the Year	$ 125,645	$ 115,207
Goodwill - Gross	$ 158,424	$ 131,749
Accumulated Impairment Losses	(32,779)	(16,542)
Goodwill - Net	$ 125,645	$ 115,207

As discussed in Note 1, goodwill is not amortized but is periodically tested for impairment. For the nine reporting units with goodwill on the first day of our fourth quarter, the Company performed a quantitative assessment of the goodwill's carrying value. As a result of this assessment, the Company recorded an impairment charge of approximately $16.2 million in the December 31, 2017 consolidated statement of operations associated to the Armstrong reporting unit, which represented all of Armstrong's goodwill. The impairment loss was incurred in the Aerospace segment and is reported on the Impairment Loss line of the Consolidated Statements of Operations. There was no impairment to the carrying value of goodwill in 2016 or 2015. All goodwill relates to the Aerospace segment.

NOTE 6 — LONG-TERM DEBT AND NOTES PAYABLE

Long-term debt consists of the following:

(In thousands)	2017	2016
Revolving Credit Line issued under the Fourth Amended and Restated Credit Agreement dated September 26, 2014. Interest is at LIBOR plus between 1.375% and 2.25% (3.30% at December 31, 2017).	$ 262,000	$ 136,000
Other Bank Debt	807	1,270
Capital Lease Obligations	8,960	10,850
	271,767	148,120
Less Current Maturities	2,689	2,636
	$ 269,078	$ 145,484

Principal maturities of long-term debt are approximately:

(In thousands)	
2018	$ 2,689
2019	1,957
2020	2,142
2021	2,066
2022	913
Thereafter	262,000
	$ 271,767

The Company's Fourth Amended and Restated Credit Agreement (the "Original Facility") provided for a $350 million revolving credit line with the option to increase the line by up to $150 million. The maturity date of the loans under the Original Facility was September 26, 2019.

On January 13, 2016, the Company amended the Original Facility to add a new lender and extend the maturity date of the credit facility from September 26, 2019 to January 13, 2021.

The maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) was 3.5 to 1, increasing to 4.0 to 1 for up to two fiscal quarters following the closing of an acquisition permitted under the Agreement. The Company paid interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.375% and 2.25% based upon the Company's leverage ratio. The Company paid a commitment fee to the Lenders in an amount equal to between 0.175% and 0.35% on the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company was required to maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement.

On February 16, 2018, the Company modified and extended the Original Facility by entering into the Fifth Amended and Restated Credit Agreement (the "Agreement"), which provides for a $500 million revolving credit line with the option to increase the line by up to $150 million. A new lender was added to the facility as well. The outstanding balances in the original Facility were rolled into the Agreement on the date of closing. The maturity date of the loans under the Agreement is February 16, 2023. The credit facility allocates up to $20 million of the $500 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2017, outstanding letters of credit totaled $1.1 million. At December 31, 2017, there was $262.0 million outstanding on the revolving credit facility and there remains $236.9 million available, net of outstanding letters of credit.

Covenants in the Agreement have been modified to where the maximum permitted leverage ratio is 3.75 to 1 beginning with quarters ended on or after December 31, 2017. However, the Company may elect to exercise its right to increase this ratio to 4.50 to 1 or up to four fiscal quarters following the closing of an acquisition permitted under the Agreement, subject to limitations. The Company will pay interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.00% and 1.50% based upon the Company's leverage ratio. The Company will also pay a commitment fee to the Lenders in an amount equal to between 0.10% and 0.20% of the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company's leverage ratio was 2.91 to 1 at December 31, 2017. The Company is in compliance with all financial and other covenants at December 31, 2017. The requirement to maintain a minimum interest coverage ratio has been eliminated.

The Company's obligations under the Credit Agreement as amended are jointly and severally guaranteed by each domestic subsidiary of the Company other than a non-material subsidiary. The obligations are secured by a first priority lien on substantially all of the Company's and the guarantors' assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Credit Agreement automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the Agent the option to declare all such amounts immediately due and payable.

NOTE 7 — WARRANTY

In the ordinary course of business, the Company warrants its products against defects in design, materials and workmanship typically over periods ranging from twelve to sixty months. The Company determines warranty reserves needed by product line based on experience and current facts and circumstances. Activity in the warranty accrual, which is included in other accrued expenses on the Consolidated Balance Sheets, is summarized as follows:

(In thousands)	2017	2016	2015
Balance at Beginning of the Year	$ 4,675	$ 5,741	$ 4,884
Warranty Liabilities Acquired	511	—	500
Warranties Issued	1,782	2,281	4,039
Reassessed Warranty Exposure	540	(966)	(485)
Warranties Settled	(2,372)	(2,381)	(3,197)
Balance at End of the Year	$ 5,136	$ 4,675	$ 5,741

NOTE 8 — INCOME TAXES

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities. Deferred tax assets are reduced, if deemed necessary, by a valuation allowance for the amount of tax benefits which are not expected to be realized. Investment tax credits are recognized on the flow through method.

The provision (benefit) for income taxes consists of the following:

(In thousands)	2017	2016	2015
Current			
U.S. Federal	$ 8,436	$ 21,667	$ 24,809
State	2,054	2,899	2,382
Foreign	316	551	137
Deferred			
U.S. Federal	(3,850)	(2,871)	703
State	(326)	(1,140)	(1,019)
Foreign	(1,318)	(745)	64
	$ 5,312	$ 20,361	$ 27,076

The effective tax rates differ from the statutory federal income tax rate as follows:

	2017	2016	2015
Statutory Federal Income Tax Rate	35.0 %	35.0 %	35.0 %
Permanent Items			
Non-deductible Stock Compensation Expense	1.1 %	1.1 %	0.6 %
Domestic Production Activity Deduction	(4.7)%	(3.3)%	(2.9)%
Other	0.5 %	0.2 %	0.2 %
Foreign Tax Benefits	(5.6)%	(1.1)%	(1.1)%
State Income Tax, Net of Federal Income Tax Effect	4.5 %	1.8 %	0.9 %
Research and Development Tax Credits	(11.5)%	(3.7)%	(2.7)%
Tax Expense on Deemed Repatriation of Foreign Earnings	5.6 %	— %	— %
Revaluation of Deferred Taxes for Federal Tax Rate Change	(3.5)%	— %	— %
Other	(0.1)%	(0.4)%	(1.2)%
Effective Tax Rate	21.3 %	29.6 %	28.8 %

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Company's deferred tax assets and liabilities as of December 31, are as follows:

(In thousands)		2017		2016
Deferred Tax Assets:				
Asset Reserves	$	5,615	$	9,208
Deferred Compensation		6,091		8,378
Capital Lease Basis Difference		1,002		1,690
State Investment and Research and Development Tax Credit Carryforwards, Net of Federal Tax		1,379		665
Customer Advanced Payments and Deferred Revenue		1,007		3,750
State Net Operating Loss Carryforwards and Other		8,115		4,282
Total Gross Deferred Tax Assets		23,209		27,973
Valuation Allowance for Foreign Tax Credit, State Deferred Tax Assets and Tax Credit Carryforwards, Net of Federal Tax		(7,823)		(3,816)
Deferred Tax Assets		15,386		24,157
Deferred Tax Liabilities:				
Depreciation		9,267		12,972
Goodwill and Intangible Assets		7,275		18,558
Other		1,149		1,280
Deferred Tax Liabilities		17,691		32,810
Net Deferred Tax Liabilities	$	(2,305)	$	(8,653)

The net deferred tax assets and liabilities presented in the Consolidated Balance Sheets are as follows at December 31:

(In thousands)		2017		2016
Other Assets — Long-term	$	2,816	$	2,644
Deferred Tax Liabilities — Long-term		(5,121)		(11,297)
Net Deferred Tax Liabilities	$	(2,305)	$	(8,653)

At December 31, 2017, state tax credit carryforwards amounted to approximately $1.8 million, of which $0.9 million will expire from 2017 through 2031 and $0.9 million will carryforward until utilized. At December 31, 2017, state net operating loss carryforwards which the Company expects to utilize amounted to approximately $13.6 million and expire at various dates between 2032 and 2037.

Due to the uncertainty as to the Company's ability to generate sufficient taxable income in certain states in the future and utilize certain of the Company's state operating loss carryforwards before they expire, the Company has recorded a valuation allowance accordingly. These state net operating loss carryforwards amount to approximately $79.9 million and expire at various dates from 2021 through 2037. The Company adopted ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting* during 2017 and beginning with 2017 the excess tax benefits associated with stock option exercises are no longer recorded directly to shareholders' equity, but rather, are recorded in the provision for income taxes, when realized. A $0.5 million benefit was recorded in the provision for incomes taxes for the year ended December 31, 2017. Amounts recorded directly to shareholders' equity amounted to approximately $0.8 million and $3.0 million for the years ended December 31, 2016, and 2015 respectively.

At December 31, 2017, estimated foreign tax credit carryforwards, which the Company expects not to utilize, amounted to approximately $0.3 million. Due to the uncertainty as to the Company's ability to generate any general limitation foreign source income in the future and utilize these foreign tax credits, the Company has recorded a valuation allowance accordingly.

The Company has analyzed its filing positions in all of the federal and state jurisdictions where it is required to file income tax returns, as well as all open tax years in these jurisdictions. Should the Company need to accrue a liability for uncertain tax benefits, any interest associated with that liability would be recorded as interest expense. Penalties, if any, would be recorded as operating expenses. As of December 31, 2017, we no longer have any unrecognized tax benefits. Reserves for uncertain tax positions that had been recorded pursuant to ASC Topic 740-10 as of December 31, 2014 were reversed during the year-ended December 31, 2015. No additional reserves for uncertain income tax positions were deemed necessary for the years ended

December 31, 2017 or 2016. A reconciliation of the total amounts of unrecognized tax benefits, excluding interest and penalties which are insignificant, is as follows:

(in thousands)	2017	2016	2015
Balance at Beginning of the Year	$ —	$ —	$ 181
Decreases as a Result of Tax Positions Taken in Prior Years	—	—	(181)
Increases as a Result of Tax Positions Taken in the Current Year	—	—	—
Balance at End of the Year	$ —	$ —	$ —

There are no penalties or interest liabilities accrued as of December 31, 2017 or 2016, nor are any material penalties or interest costs included in expense for each of the years ended December 31, 2017, 2016 and 2015. The years under which we conducted our evaluation coincided with the tax years currently still subject to examination by major federal and state tax jurisdictions, those being 2014 through 2017 for federal purposes and 2013 through 2017 for state purposes.

Pretax income from the Company's foreign subsidiaries amounted to $1.1 million, $1.6 million and $3.6 million for 2017, 2016 and 2015, respectively. The balance of pretax earnings for each of those years were domestic.

On December 22, 2017, the President of the United States signed into law the Tax Cuts and Jobs Act. The legislation significantly changes U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The Tax Cuts and Jobs Act permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018.

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to reverse. As a result of the reduction in the U.S. corporate income tax rate from 35% to 21% under the Tax Cuts and Jobs Act, the Company revalued its ending net deferred tax liabilities at December 31, 2017 and recognized a provisional $0.9 million tax benefit in the Company's consolidated statement of income for the year ended December 31, 2017.

The Tax Cuts and Jobs Act provided for a one-time deemed mandatory repatriation of post-1986 undistributed foreign subsidiary earnings and profits ("E&P") through the year ended December 31, 2017. The Company had an estimated $10.3 million of undistributed foreign E&P subject to the deemed mandatory repatriation and recognized a provisional $1.4 million of income tax expense in the Company's consolidated statement of income for the year ended December 31, 2017. After the utilization of existing tax credits, the Company expects to pay additional U.S. federal cash taxes of approximately $1.3 million on the deemed mandatory repatriation, payable over eight years. In addition, the Company expects to pay additional State cash taxes of approximately $0.1 million on the deemed mandatory repatriation. No additional provision for U.S. federal or foreign taxes has been made as the foreign subsidiaries' undistributed earnings are considered to be permanently reinvested. It is not practicable to determine the amount of other taxes that would be payable if these amounts were repatriated to the U.S.

While the Tax Cuts and Jobs Act provides for a territorial tax system, beginning in 2018, it includes two new U.S. tax base erosion provisions, the global intangible low-taxed income ("GILTI") provisions and the base-erosion and anti-abuse tax ("BEAT") provisions.

The GILTI provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The Company expects that it will be subject to incremental U.S. tax on GILTI income beginning in 2018, due to expense allocations required by the U.S. foreign tax credit rules. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax impacts of GILTI in its consolidated financial statements for the year ended December 31, 2017.

The BEAT provisions in the Tax Cuts and Jobs Act eliminates the deduction of certain base-erosion payments made to related foreign corporations, and impose a minimum tax if greater than regular tax. The Company does not expect it will be subject to this tax and therefore has not included any tax impacts of BEAT in its consolidated financial statements for the year ended December 31, 2017.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Cuts and Jobs Act. The

Company has recognized the provisional tax impacts related to deemed repatriated earnings and the revaluation of deferred tax assets and liabilities and included these amounts in its consolidated financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provisional amounts, possibly materially, due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the Tax Cuts and Jobs Act. The accounting is expected to be complete when the 2017 U.S. corporate income tax return is filed in 2018.

NOTE 9 — PROFIT SHARING/401(k) PLAN

The Company offers eligible domestic full-time employees participation in certain profit sharing/401(k) plans. The plans provide for a discretionary annual company contribution. In addition, employees may contribute a portion of their salary to the plans which is partially matched by the Company. The plans may be amended or terminated at any time.

Total charges to income before income taxes for these plans were approximately $7.4 million, $6.7 million and $6.3 million in 2017, 2016 and 2015, respectively.

NOTE 10 — RETIREMENT PLANS AND RELATED POST RETIREMENT BENEFITS

The Company has two non-qualified supplemental retirement defined benefit plans ("SERP" and "SERP II") for certain current and retired executive officers. The accumulated benefit obligation of the plans as of December 31, 2017 and 2016 amounts to $22.7 million and $18.6 million, respectively.

The Plans provide for benefits based upon average annual compensation and years of service and in the case of SERP, there are offsets for social security and profit sharing benefits. It is the Company's intent to fund the plans as plan benefits become payable, since no assets exist at December 31, 2017 or 2016 for either of the plans.

The Company accounts for the funded status (i.e., the difference between the fair value of plan assets and the projected benefit obligations) of its pension plans in accordance with the recognition and disclosure provisions of ASC Topic 715, *Compensation, Retirement Benefits*, which requires the Company to recognize the funded status in its balance sheet, with a corresponding adjustment to AOCI, net of tax. These amounts will be subsequently recognized as net periodic pension cost pursuant to the Company's historical policy for amortizing such amounts. Further, actuarial gains and losses that arise in subsequent periods and are not recognized as net periodic pension cost in the same periods will be recognized as a component of AOCI. Those amounts will be subsequently recognized as a component of net periodic pension cost on the same basis as the amounts recognized in AOCI.

Unrecognized prior service costs of $2.3 million ($3.5 million net of $1.2 million in taxes) and unrecognized actuarial losses of $6.0 million ($8.6 million net of $2.6 million in taxes) are included in AOCI at December 31, 2017 and have not yet been recognized in net periodic pension cost. The prior service cost included in AOCI that is expected to be recognized in net periodic pension cost during the fiscal year-ended December 31, 2018 is $0.3 million ($0.4 million net of $0.1 million in taxes). The actuarial loss included in AOCI expected to be recognized in net periodic pension cost during the fiscal year-ended December 31, 2017 is $0.4 million ($0.6 million net of $0.2 million in taxes).

The reconciliation of the beginning and ending balances of the projected benefit obligation of the plans for the years ended December 31 is as follows:

(In thousands)	2017	2016
Funded Status		
Projected Benefit Obligation		
Beginning of the Year — January 1	$ 21,533	$ 20,418
Service Cost	186	173
Interest Cost	897	901
Actuarial Loss	2,873	389
Benefits Paid	(348)	(348)
End of the Year — December 31	$ 25,141	$ 21,533

The assumptions used to calculate the projected benefit obligation as of December 31 are as follows:

	2017	2016
Discount Rate	3.60%	4.20%
Future Average Compensation Increases	2.00% – 3.00%	3.00% – 5.00%

The plans are unfunded at December 31, 2017 and are recognized in the accompanying Consolidated Balance Sheets as a current accrued pension liability of $0.3 million and a long-term accrued pension liability of$24.8 million. This also is the expected future contribution to the plan, since the plan is unfunded.

The following table summarizes the components of the net periodic cost for the years ended December 31:

(In thousands)	2017	2016	2015
Net Periodic Cost			
Service Cost — Benefits Earned During Period	$ 186	$ 173	$ 194
Interest Cost	897	901	843
Amortization of Prior Service Cost	387	413	495
Amortization of Losses	369	343	449
Net Periodic Cost	$ 1,839	$ 1,830	$ 1,981

The assumptions used to determine the net periodic cost are as follows:

	2017	2016	2015
Discount Rate	4.20%	4.45%	4.05%
Future Average Compensation Increases	3.00% – 5.00%	3.00% – 5.00%	5.00%

The Company expects the benefits to be paid in each of the next five years to be $0.3 million and $2.8 million in the aggregate for the next five years after that. This also is the expected Company contribution to the plans.

Participants in SERP are entitled to paid medical, dental and long-term care insurance benefits upon retirement under the plan. The measurement date for determining the plan obligation and cost is December 31.

The reconciliation of the beginning and ending balances of the accumulated postretirement benefit obligation for the years ended December 31, is as follows:

(In thousands)	2017	2016
Funded Status		
Accumulated Postretirement Benefit Obligation		
Beginning of the Year — January 1	$ 1,021	$ 925
Service Cost	7	5
Interest Cost	41	40
Actuarial (Gain) Loss	307	112
Benefits Paid	(69)	(61)
End of the Year — December 31	$ 1,307	$ 1,021

The assumptions used to calculate the accumulated post-retirement benefit obligation as of December 31 are as follows:

	2017	2016
Discount Rate	3.60%	4.20%

The following table summarizes the components of the net periodic cost for the years ended December 31:

(In thousands)	2017	2016	2015
Net Periodic Cost			
Service Cost — Benefits Earned During Period	$ 7	$ 5	$ 6
Interest Cost	41	40	39
Amortization of Prior Service Cost	16	24	26
Amortization of Losses	31	22	26
Net Periodic Cost	$ 95	$ 91	$ 97

The assumptions used to determine the net periodic cost are as follows:

	2017	2016	2015
Discount Rate	4.20%	4.45%	4.05%
Future Average Healthcare Benefit Increases	5.50%	5.72%	5.32%

Unrecognized prior service costs of $0.1 million and unrecognized actuarial losses of $0.5 million for medical, dental and long-term care insurance benefits (net of taxes of $0.2 million) are included in AOCI at December 31, 2017 and have not been recognized in net periodic cost. The Company estimates that the prior service costs and net losses in AOCI as of December 31, 2017 that will be recognized as components of net periodic benefit cost during the year ended December 31, 2018 for the Plan will be insignificant. For measurement purposes, a 6.2% increase in the cost of health care benefits was assumed for 2018 and 2019, respectively, and a range between 4.2% and 6.2% from 2019 through 2070. A one percentage point increase or decrease in this rate would change the post retirement benefit obligation by approximately $0.1 million. The plan is recognized in the accompanying Consolidated Balance Sheets as a current accrued pension liability of less than $0.1 million and a long-term accrued pension liability of$1.2 million. The Company expects the benefits to be paid in each of the next five years to be less than $0.1 million per year and approximately $0.3 million in the aggregate for the next five years after that. This also is the expected Company contribution to the plan, as it is unfunded.

The Company is a participating employer in a trustee-managed multiemployer defined benefit pension plan for employees who participate in collective bargaining agreements. The plan generally provides retirement benefits to employees based on years of service to the Company. Contributions are based on the hours worked and are expensed on a current basis. The Plan is 91.2% funded as of January 1, 2017. The Company's contributions to the plan were $1.1 million in 2017, $1.1 million in 2016 and $1.0 million in 2015. These contributions represent less than 1% of total contributions to the plan.

NOTE 11 — SHAREHOLDERS' EQUITY

Share Buyback Program

On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to $50 million of common stock (the "Buyback Program"). The Buyback Program allows the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Company has repurchased approximately 1,675,000 shares and has completed that program. On December 12, 2017, the Company's Board of Directors authorized an additional repurchase of up to $50 million of common stock. No amounts have been repurchased under the new program as of December 31, 2017.

Reserved Common Stock

At December 31, 2017, approximately 10.5 million shares of common stock were reserved for issuance upon conversion of the Class B stock, exercise of stock options and purchases under the Employee Stock Purchase Plan. Class B Stock is identical to Common Stock, except Class B Stock has ten votes per share, is automatically converted to Common Stock on a one-for-one basis when sold or transferred other than via gift, devise or bequest and cannot receive dividends unless an equal or greater amount of dividends is declared on Common Stock.

Comprehensive Income and Accumulated Other Comprehensive Income (Loss)

Comprehensive income consists of net income and the after-tax impact of retirement liability adjustments. No income tax effect is recorded for currency translation adjustments.

The components of accumulated other comprehensive income (loss) are as follows:

(In thousands)	2017	2016
Foreign Currency Translation Adjustments	$ (4,465)	$ (8,597)
Retirement Liability Adjustment – Before Tax	(12,988)	(10,611)
Tax Benefit	4,101	3,714
Retirement Liability Adjustment – After Tax	(8,887)	(6,897)
Accumulated Other Comprehensive Loss	$ (13,352)	$ (15,494)

The components of other comprehensive income (loss) are as follows:

(In thousands)	2017	2016	2015
Foreign Currency Translation Adjustments	$ 4,132	$ (626)	$ (4,617)
Retirement Liability Adjustment	(2,377)	301	2,311
Tax Benefit (Expense)	387	(105)	(809)
Retirement Liability Adjustment	(1,990)	196	1,502
Other Comprehensive Income (Loss)	$ 2,142	$ (430)	$ (3,115)

NOTE 12 — EARNINGS PER SHARE

Earnings per share computations are based upon the following table:

(In thousands, except per share data)	2017	2016	2015
Net Income	$ 19,679	$ 48,424	$ 66,974
Basic Earnings Weighted Average Shares	28,586	29,163	29,245
Net Effect of Dilutive Stock Options	734	869	934
Diluted Earnings Weighted Average Shares	29,320	30,032	30,179
Basic Earnings Per Share	$ 0.69	$ 1.66	$ 2.29
Diluted Earnings Per Share	$ 0.67	$ 1.61	$ 2.22

Stock options with exercise prices greater than the average market price of the underlying common shares are excluded from the computation of diluted earnings per share because they are out-of-the-money and the effect of their inclusion would be anti-dilutive. The number of common shares excluded from the computation was approximately 0.1 million for the year ended December 31, 2017, 0.2 million for the year ended December 31, 2016, and 0.1 million for the year ended December 31, 2015.

NOTE 13 — STOCK OPTION AND PURCHASE PLANS

The Company has stock option plans that authorize the issuance of options for shares of Common Stock to directors, officers and key employees. Stock option grants are designed to reward long-term contributions to the Company and provide incentives for recipients to remain with the Company. The exercise price, determined by a committee of the Board of Directors, may not be less than the fair market value of the Common Stock on the grant date. Options become exercisable over periods not exceeding ten years. The Company's practice has been to issue new shares upon the exercise of the options.

Stock compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Vesting requirements vary for directors, officers and key employees. In general, options granted to outside directors vest six months from the date of grant and options granted to officers and key employees straight line vest over a five-year period from the date of grant.

	2017	2016	2015
Weighted Average Fair Value of the Options Granted	$ 17.60	$ 16.85	$ 18.00

The weighted average fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	2017	2016	2015
Risk-free Interest Rate	2.05% – 2.36%	1.08% – 2.34%	1.36% – 2.10%
Dividend Yield	—%	—%	—%
Volatility Factor	0.40 – 0.41	0.40 – 0.45	0.40 – 0.51
Expected Life in Years	5.0 – 8.0	4.0 – 8.0	4.0 – 8.0

To determine expected volatility, the Company uses historical volatility based on weekly closing prices of its Common Stock and considers currently available information to determine if future volatility is expected to differ over the expected terms of the options granted. The risk-free rate is based on the U.S. Treasury yield curve at the time of grant for the appropriate term of the options granted. Expected dividends are based on the Company's history and expectation of dividend payouts. The expected term of stock options is based on vesting schedules, expected exercise patterns and contractual terms.

The following table provides compensation expense information based on the fair value of stock options for the years ended December 31, 2017, 2016 and 2015:

(In thousands)	2017	2016	2015
Stock Compensation Expense	$ 2,598	$ 2,281	$ 2,274
Tax Benefit	(140)	(145)	(177)
Stock Compensation Expense, Net of Tax	$ 2,458	$ 2,136	$ 2,097

A summary of the Company's stock option activity and related information for the years ended December 31 is as follows:

(Aggregate intrinsic value in thousands)	2017			2016			2015		
	Options	Weighted Average Exercise Price	Aggregate Intrinsic Value	Options	Weighted Average Exercise Price	Aggregate Intrinsic Value	Options	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding at January 1	1,338,273	$ 14.85	$ 35,630	1,444,954	$ 12.61	$ 30,675	1,686,178	$ 9.43	$ 43,778
Options Granted	103,140	$ 38.41	$ 315	104,900	$ 34.29	$ (48)	105,742	$ 35.80	$ (42)
Options Exercised	(114,699)	$ 11.24	$ (3,467)	(188,768)	$ 7.20	$ (5,029)	(346,966)	$ 4.25	$ (10,808)
Options Forfeited	(16,624)	$ 27.91	$ (225)	(22,813)	$ 25.96	$ (180)	—	$ —	$ —
Outstanding at December 31	1,310,090	$ 16.85	$ 32,253	1,338,273	$ 14.85	$ 25,418	1,444,954	$ 12.61	$ 32,928
Exercisable at December 31	1,088,970	$ 12.84	$ 31,177	1,091,561	$ 11.03	$ 24,898	1,167,040	$ 9.20	$ 30,576

The aggregate intrinsic value in the preceding table represents the total pretax option holder's intrinsic value, based on the Company's closing stock price of Common Stock which would have been received by the option holders had all option holders exercised their options as of that date. The Company's closing stock price of Common Stock was $41.47, $33.84 and $35.40 as of December 31, 2017, 2016 and 2015, respectively.

The weighted average fair value of options vested during 2017, 2016 and 2015 was $14.25, $12.05 and $10.85, respectively. The total fair value of options that vested during the year amounted to $1.6 million, $1.4 million and $1.5 million for the years ended December 31, 2017, 2016 and 2015, respectively. At December 31, 2017, total compensation costs related to non-vested awards not yet recognized amounts to $4.8 million and will be recognized over a weighted average period of 2.3 years.

The following is a summary of weighted average exercise prices and contractual lives for outstanding and exercisable stock options as of December 31, 2017:

	Outstanding			Exercisable		
Exercise Price Range	**Shares**	**Weighted Average Remaining Life in Years**	**Weighted Average Exercise Price**	**Shares**	**Weighted Average Remaining Life in Years**	**Weighted Average Exercise Price**
$ 3.07 - $ 3.67	470,757	1.5	$ 3.29	470,757	1.5	$ 3.29
$ 6.35 - $ 6.35	15,055	0.2	$ 6.35	15,055	0.2	$ 6.35
$ 8.83 - $15.68	374,619	4.0	$ 11.52	374,619	4.0	$ 11.52
$ 26.09 - $41.19	429,819	8.0	$ 35.06	208,699	7.4	$ 33.41
$ 52.77 - $52.77	19,840	7.2	$ 52.77	19,840	7.2	$ 52.77
	1,310,090	4.4	$ 16.85	1,088,970	3.6	$ 12.84

The Company established Incentive Stock Option Plans for the purpose of attracting and retaining executive officers and key employees, and to align management's interest with those of the shareholders. Generally, the options must be exercised within ten years from the grant date and vest ratably over a five-year period. The exercise price for the options is equal to the share price at the date of grant. At December 31, 2017, the Company had options outstanding for 1,034,898 shares under the plans.

The Company established the Directors Stock Option Plans for the purpose of attracting and retaining the services of experienced and knowledgeable outside directors, and to align their interest with those of the shareholders. The options must be exercised within ten years from the grant date. The exercise price for the option is equal to the share price at the date of grant and vests six months from the grant date. At December 31, 2017, the Company had options outstanding for 204,052 shares under the plans.

During 2017, the Company established the Long Term Incentive Plan for the purpose of attracting and retaining executive officers and key employees, and to align management's interest with those of the shareholders. The Plan contemplates the use of a mix of equity award types, and contains, with certain exceptions, a minimum three-year pro-rata vesting schedule for time-based awards. For stock options, the exercise price is equal to the share price on the date of grant. Upon inception, the remaining options available for future grant under the 2011 Incentive Stock Option Plan and the Directors Stock Option Plans were rolled in the Long Term Incentive Plan, and no further grants may be made out of those plans. At December 31, 2017, the Company had stock options outstanding of 71,140 shares under the Long Term Incentive Plan, and there were 1,685,899 shares available for future grant under this plan.

In addition to the options discussed above, the Company has established the Employee Stock Purchase Plan to encourage employees to invest in Astronics Corporation. The plan provides employees the opportunity to invest up to the IRS annual maximum of approximately $21,250 in Astronics common stock at a price equal to 85% of the fair market value of the Astronics common stock, determined each October 1. Employees are allowed to enroll annually. Employees indicate the number of shares they wish to obtain through the program and their intention to pay for the shares through payroll deductions over the annual cycle of October 1 through September 30. Employees can withdraw anytime during the annual cycle, and all money withheld from the employees pay is returned with interest. If an employee remains enrolled in the program, enough money will have been withheld from the employees' pay during the year to pay for all the shares that the employee opted for under the program. At December 31, 2017, employees had subscribed to purchase 129,798 shares at $25.63 per share. The weighted average fair value of the options was approximately $5.92, $9.88 and $6.93 for options granted during the year ended December 31, 2017, 2016 and 2015, respectively.

The fair value for the options granted under the Employee Stock Purchase Plan was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	2017	**2016**	**2015**
Risk-free Interest Rate	1.31%	0.63%	0.31%
Dividend Yield	—%	—%	—%
Volatility Factor	0.26	0.45	0.40
Expected Life in Years	1.0	1.0	1.0

NOTE 14 — FAIR VALUE

ASC Topic 820, *Fair value Measurements and Disclosures*, ("ASC Topic 820") defines fair value, establishes a framework for measuring fair value and expands the related disclosure requirements. This statement applies under other accounting pronouncements that require or permit fair value measurements. The statement indicates, among other things, that a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. ASC Topic 820 defines fair value based upon an exit price model. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and involves consideration of factors specific to the asset or liability.

ASC Topic 820 establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

On a Recurring Basis:

A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. The financial liabilities carried at fair value measured on a recurring basis consisted of contingent consideration related to certain prior acquisitions, valued at zero at December 31, 2016. The values were determined using Level 3 inputs. There are no financial liabilities carried at fair value measured on a recurring basis at December 31, 2017.

There were no financial assets carried at fair value measured on a recurring basis at December 31, 2017 or 2016. The amounts recorded for the contingent considerations were calculated using an estimate of the probability of the future cash outflows. The varying contingent payments were then discounted to the present value utilizing a discounted cash flow methodology. The contingent consideration liabilities had no observable Level 1 or Level 2 inputs. The change in the balance of contingent consideration during fiscal 2015 was primarily due to fair value adjustments of $1.8 million resulting from the re-evaluation of the probability of the achievement of the contingent consideration targets. This adjustment was recorded within SG&A expenses in the Consolidated Statements of Operations.

On a Non-recurring Basis:

In accordance with the provisions of ASC Topic 350, *Intangibles – Goodwill and Other,* the Company estimates the fair value of reporting units, utilizing unobservable Level 3 inputs. Level 3 inputs require significant management judgment due to the absence of quoted market prices or observable inputs for assets of a similar nature. The Company utilizes a discounted cash flow method to estimate the fair value of reporting units utilizing unobservable inputs. The fair value measurement of the reporting unit under the step-one and step-two analysis of the quantitative goodwill impairment test are classified as Level 3 inputs. As a result of the annual goodwill impairment test for 2017, the Company recorded an impairment charge of $16.2 million related to the Armstrong reporting unit. Due to the adoption of ASU No. 2017-04 on January 1, 2017, the goodwill impairment was calculated as the amount by which the reporting unit's carrying value exceeded its fair value, not to exceed the carrying value of goodwill. There were no impairment charges to goodwill in any of the Company's reporting units in 2016 or 2015.

Long-lived assets are evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying value may not be recoverable. The recoverability test consists of comparing the undiscounted projected cash flows with the carrying amount. Should the carrying amount exceed undiscounted projected cash flows, an impairment loss would be recognized to the extent the carrying amount exceeds fair value. There were no impairment charges to any of the Company's long-lived assets in either of the Company's segments in 2017, 2016 or 2015.

The Armstrong, CCC, and CSC intangible assets were valued using a discounted cash flow methodology, as of their respective acquisitions dates, and are classified as Level 3 inputs.

Due to their short-term nature, the carrying value of cash and equivalents, accounts receivable, accounts payable, and notes payable approximate fair value. The carrying value of the Company's variable rate long-term debt instruments also approximates fair value due to the variable rate feature of these instruments.

NOTE 15 — SELECTED QUARTERLY FINANCIAL INFORMATION

The following table summarizes selected quarterly financial information for 2017 and 2016:

	Quarter Ended							
(Unaudited) (In thousands, except for per share data)	**Dec. 31, 2017**	**Sep. 30, 2017**	**July 1, 2017**	**April 1, 2017**	**Dec. 31, 2016**	**Oct. 1, 2016**	**July 2, 2016**	**April 2, 2016**
Sales	$ 171,318	$ 149,636	$ 151,114	$ 152,396	$ 154,068	$ 155,099	$ 164,426	$ 159,530
Gross Profit (sales less cost of products sold)	$ 32,153	$ 32,493	$ 34,150	$ 38,317	$ 36,486	$ 38,663	$ 44,835	$ 39,483
Impairment Loss	$ 16,237	$ —	$ —	$ —	$ —	$ —	$ —	$ —
(Loss) Income Before Income Taxes	$ (9,715)	$ 8,646	$ 10,569	$ 15,491	$ 14,296	$ 16,422	$ 21,555	$ 16,512
Net (Loss) Income	$ (5,653)	$ 6,060	$ 7,685	$ 11,587	$ 9,885	$ 12,074	$ 14,980	$ 11,485
Basic Earnings (Loss) Per Share	$ (0.20)	$ 0.21	$ 0.27	$ 0.40	$ 0.34	$ 0.42	$ 0.51	$ 0.39
Diluted Earnings (Loss) Per Share	$ (0.20)	$ 0.21	$ 0.26	$ 0.38	$ 0.33	$ 0.41	$ 0.50	$ 0.38

NOTE 16 — COMMITMENTS AND CONTINGENCIES

The Company leases certain facilities and equipment under various lease contracts with terms that meet the accounting definition of operating leases. These arrangements may include fair value renewal or purchase options. Rental expense for the years ended December 31, 2017, 2016 and 2015 was $3.5 million, $3.9 million and $2.9 million, respectively. The following table represents future minimum lease payment commitments as of December 31, 2017:

(In thousands)	
2018	$ 4,141
2019	2,194
2020	530
2021	115
2022	—
	$ 6,980

From time to time the Company may enter into purchase agreements with suppliers under which there is a commitment to buy a minimum amount of product. Purchase commitments outstanding at December 31, 2017 were $178.1 million. These commitments are not reflected as liabilities in the Company's Consolidated Balance Sheets.

Legal Proceedings

On December 29, 2010, Lufthansa Technik AG ("Lufthansa") filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa's claim asserts that our subsidiary, AES sold, marketed and brought into use in Germany a power supply system that infringes upon a German patent held by Lufthansa. The relief sought by Lufthansa includes requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers since November 26, 2003 and compensation for damages. The claim does not specify an estimate of damages and a damages claim will be made by Lufthansa only if it receives a favorable ruling on the determination of infringement.

On February 6, 2015, the Regional State Court of Mannheim, Germany rendered its decision that the patent was infringed. The judgment does not require AES to recall products that are already installed in aircraft or have been sold to other end users. On July 15, 2015, Lufthansa advised AES of their intention to enforce the accounting provisions of the decision, which required AES to provide certain financial information regarding sales of the infringing product to enable Lufthansa to make an estimate of requested damages. Additionally, if Lufthansa provides the required bank guarantee specified in the decision, the Company may be required to offer a recall of products that are in the distribution channels in Germany. No such bank guarantee has been issued to date. As of December 31, 2017 , there are no products in the distribution channels in Germany.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Court issued its ruling and upheld the lower court's decision. The Company has submitted a petition to grant AES leave for appeal to the Federal Supreme Court. The Company believes it has valid defenses to refute the decision. Should the Federal Supreme Court decide to hear the case, the appeal process is estimated to extend up to two years. We estimate AES's potential exposure related to this matter to be approximately $1 million to $3 million. As loss exposure is not probable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

On November 26, 2014, Lufthansa filed a complaint in the United States District for the Western District of Washington. Lufthansa's complaint in this action alleges that AES manufactures, uses, sells and offers for sale a power supply system that infringes upon a U.S. patent held by Lufthansa. The patent at issue in the U.S. action is based on technology similar to that involved in the German action. On April 25, 2016, the Court issued its ruling on claim construction, holding that the sole independent claim in the patent is indefinite, rendering all claims in the patent indefinite. Based on this ruling, AES filed a motion for summary judgment on the grounds that the Court's ruling that the patent is indefinite renders the patent invalid and unenforceable. On July 20, 2016, the U.S. District Court granted the motion for summary judgment and issued an order dismissing all claims against AES with prejudice. Lufthansa appealed the District Court's decision to the United States Court of Appeals for the Federal Circuit. On October 19, 2017, the Federal Circuit affirmed the District Court's decision, holding that the sole independent claim of the patent is indefinite, rendering all claims on the patent indefinite. Lufthansa did not file a petition for en banc rehearing or petition the U.S. Supreme Court for a writ of certiorari. Therefore, there is no longer a risk of exposure from that lawsuit.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom and in France against AES. AES has been served in the case in France, but not in the case in the United Kingdom. In those cases, Lufthansa accuses AES of manufacturing, using, selling and offering for sale a power supply system that infringes upon a Lufthansa patent in those respective countries. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to this litigation as of December 31, 2017.

NOTE 17 — SEGMENTS

Segment information and reconciliations to consolidated amounts for the years ended December 31 are as follows:

(In thousands)	2017	2016	2015
Sales:			
Aerospace	$ 534,724	$ 534,408	$ 549,738
Less Inter-segment Sales	(121)	(367)	—
Total Aerospace Sales	534,603	534,041	549,738
Test Systems	89,861	99,082	142,596
Less Inter-segment Sales	—	—	(55)
Test Systems	89,861	99,082	142,541
Total Consolidated Sales	$ 624,464	$ 633,123	$ 692,279
Operating Profit and Margins:			
Aerospace	$ 38,888	$ 77,966	$ 85,103
	7.3%	14.6%	15.5%
Test Systems	7,359	8,507	25,529
	8.2%	8.6%	17.9%
Total Operating Profit	$ 46,247	$ 86,473	$ 110,632
	7.4%	13.7%	16.0%
Deductions from Operating Profit:			
Interest Expense, Net of Interest Income	$ (5,369)	$ (4,354)	$ (4,751)
Corporate and Other Expenses, Net	(15,887)	(13,334)	(11,831)
Income before Income Taxes	$ 24,991	$ 68,785	$ 94,050
Depreciation and Amortization:			
Aerospace	$ 22,111	$ 19,873	$ 19,377
Test Systems	4,302	5,273	5,209
Corporate	650	644	723
Total Depreciation and Amortization	$ 27,063	$ 25,790	$ 25,309
Assets:			
Aerospace	$ 621,047	$ 500,892	$ 510,884
Test Systems	90,859	76,575	64,934
Corporate	24,050	26,877	33,425
Total Assets	$ 735,956	$ 604,344	$ 609,243
Capital Expenditures:			
Aerospace	$ 10,656	$ 9,511	$ 16,503
Test Systems	2,721	3,345	2,103
Corporate	101	181	35
Total Capital Expenditures	$ 13,478	$ 13,037	$ 18,641

Operating profit is sales less cost of products sold and other operating expenses, excluding interest expense and other corporate expenses. Cost of products sold and other operating expenses are directly identifiable to the respective segment.

For the years ended December 31, 2017, there was a goodwill impairment loss of $16.2 million recorded in the Aerospace segment. In

2016 and 2015, there was no goodwill or purchased intangible asset impairment losses in either the Aerospace or Test System segment. In the Aerospace segment, goodwill amounted to $125.6 million and $115.2 million at December 31, 2017 and 2016, respectively. In the Test Systems segment, there was no goodwill as of December 31, 2017 and 2016.

The following table summarizes the Company's sales into the following geographic regions for the years ended December 31:

(In thousands)	2017	2016	2015
United States	$ 482,219	$ 504,270	$ 508,724
North America (excluding United States)	6,198	12,331	13,044
Asia	58,732	52,171	108,967
Europe	73,677	61,200	57,936
South America	1,280	577	1,112
Other	2,358	2,574	2,496
	$ 624,464	$ 633,123	$ 692,279

The following table summarizes the Company's property, plant and equipment by country for the years ended December 31:

(In thousands)	2017	2016	2015
United States	$ 116,026	$ 114,048	$ 115,117
France	9,094	8,216	9,092
Canada	710	548	533
	$ 125,830	$ 122,812	$ 124,742

Sales recorded by the Company's foreign operations were $53.9 million, $50.1 million and $50.8 million in 2017, 2016 and 2015, respectively. Net income from these locations was $2.2 million, $1.8 million and $3.4 million in 2017, 2016 and 2015, respectively. Net assets held outside of the U.S. total $47.4 million and $36.8 million at December 31, 2017 and 2016, respectively. The exchange gain included in determining net income was insignificant in 2017 and 2016. Cumulative translation adjustments amounted to $(4.5) million and $(8.6) million at December 31, 2017 and 2016, respectively.

The Company has a significant concentration of business with two major customers; Panasonic Aviation Corporation ("Panasonic") and The Boeing Company ("Boeing"). The following is information relating to the activity with those customers:

	2017	2016	2015
Percent of Consolidated Revenue			
Panasonic	19.1%	21.6%	21.0%
Boeing	16.8%	15.2%	13.0%

(In thousands)	2017	2016
Accounts Receivable at December 31,		
Panasonic	$ 10,200	$ 17,126
Boeing	$ 12,969	$ 11,737

Sales to Panasonic are in the Aerospace segment. Sales to Boeing occur in both segments.

NOTE 18 — ACQUISITIONS

Astronics Connectivity Systems and Certification Corp.

On December 1 2017, Astronics completed the acquisition of substantially all of the assets and liabilities of Telefonix Inc., including 100% of the stock of a related company, Product Development Technologies, LLC and its subsidiaries. The combined group designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. The company's products include wireless access points, file servers, content loaders, passenger control units and cord reels, as well as engineering services for its customers. We purchased the assets of these companies for approximately $103.8 million, net of $0.2 million in cash acquired. The acquired companies are included in our Aerospace reporting segment.

The allocation of the purchase price paid for CSC is based on fair values of the acquired assets and liabilities assumed of CSC as of December 1, 2017.

The preliminary allocation of purchase price based on appraised fair values was as follows (in thousands):

Cash	$	213
Accounts Receivable		9,300
Inventory		12,558
Other Current Assets		274
Fixed Assets		1,434
Other Long Term Assets		50
Purchased Intangible Assets		62,200
Goodwill		23,397
Accounts Payable, Accrued Expenses, and Other Current Liabilities		(5,372)
Total Purchase Price	$	104,054

The preliminary amounts allocated to the purchased intangible assets consist of the following:

(In thousands)	Weighted Average Life	Acquisition Fair Value
Trademark	9 Years	$ 1,000
Technology	9 Years	12,000
Backlog	0.4 Years	2,800
Non-compete Agreements	3 - 5 years	8,400
Customer Relationships/Backlog	15 Years	38,000
		$ 62,200

Goodwill and other intangible assets reflected above were determined to meet the criterion for recognition apart from tangible assets acquired and liabilities assumed. The goodwill is primarily attributable to expected synergies and the assembled workforce. All of the goodwill and purchased intangible assets are expected to be deductible for tax purposes over 15 years.

The following is a summary of the sales and amounts included in income from operations for CSC included in the consolidated financial statements of the Company from the date of acquisition to December 31, 2017 (in thousands):

Sales	$	6,174
Operating Loss	$	(499)

The following summary, prepared on a pro forma basis, combines the consolidated results of operations of the Company with those of CSC as if the acquisition took place on January 1, 2017. The pro forma consolidated results include the impact of certain adjustments, including increased interest expense on acquisition debt, amortization of purchased intangible assets and income taxes.

	UNAUDITED	
(in thousands, except earnings per share)	2017	2016
Sales	$ 683,541	$ 686,143
Net income	$ 18,302	$ 41,672
Basic earnings per share	$ 0.64	$ 1.43
Diluted earnings per share	$ 0.62	$ 1.39

The pro forma results are not necessarily indicative of what actually would have occurred if the acquisition had been in effect for the year ended December 31, 2017 and 2016. In addition, they are not intended to be a projection of future results.

Astronics Custom Control Concepts, Inc.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC (“CCC”), located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately $10.2 million, net of $0.5 million in cash acquired. All of the goodwill and purchased intangible assets are expected to be deductible for tax purposes over 15 years. CCC is included in our Aerospace segment. The purchase price allocation for this acquisition has been finalized.

Armstrong Aerospace, Inc.

On January 14, 2015, the Company purchased 100% of the equity of Armstrong for $52.3 million in cash. Armstrong, located in Itasca, Illinois, is a leading provider of engineering, design and certification solutions for commercial aircraft, specializing in connectivity, in-flight entertainment, and electrical power systems. Armstrong is included in our Aerospace segment. This transaction was not considered material to the Company’s financial position or results of operations. All of the goodwill and purchased intangible assets are expected to be deductible for tax purposes over 15 years. The purchase price allocation for this acquisition has been finalized.

Acquisition costs are expensed as incurred. Acquisition related expenses were approximately $0.3 million in 2017, insignificant in 2016, and $0.4 million in 2015.

ITEM 9. *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE*

Not applicable.

ITEM 9A. *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

The Company carried out an evaluation, under the supervision and with the participation of Company Management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures are effective as of the end of the period covered by this report, to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is made known to them on a timely basis, and that these disclosure controls and procedures are effective to ensure such information is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms.

Management's Report on Internal Control over Financial Reporting

See the report appearing under Item 8, Financial Statements and Supplemental Data, Managements Report on Internal Control Over Financial Reporting.

Remediation of Material Weaknesses

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness that we previously reported was identified as of December 31, 2016 related to the design of information technology change controls over a report writing application. Additionally, management identified deficiencies in certain review controls over the financial statement consolidation process, which when aggregated along with the information technology change controls matter described above, aggregated to a material weakness over the financial statement close process as of December 31, 2016.

The Company has implemented changes to the design and application of new controls and has made significant changes to the design of existing controls over information technology as well as controls related to the financial statement consolidation process. During the fourth quarter of fiscal 2017, we successfully completed the testing necessary to conclude that the material weaknesses have been remediated.

Changes in Internal Control over Financial Reporting

We have taken actions to remediate the material weaknesses related to our internal control over financial reporting, as described in *Remediation of Material Weaknesses* above. Other than remediation of the material weaknesses referenced above, there have been no changes in the Company's internal control over financial reporting during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. *OTHER INFORMATION*

None

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information regarding directors is contained under the captions “Election of Directors” and “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference to the 2018 Proxy to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

The executive officers of the Company, their ages, their positions and offices with the Company, and the date each assumed their office with the Company, are as follows:

Name and Age of Executive Officer	Positions and Offices with Astronics	Year First Elected Officer
Peter J. Gundermann Age 55	President, Chief Executive Officer and Director of the Company	2001
David C. Burney Age 55	Executive Vice President, Secretary and Chief Financial Officer of the Company	2003
Mark A. Peabody Age 58	Astronics Advanced Electronic Systems President and Executive Vice President of Astronics Corporation	2010
James S. Kramer Age 54	Luminescent Systems Inc. President and Executive Vice President of Astronics Corporation	2010

The principal occupation and employment for all executives listed above for the past five years has been with the Company.

The Company has adopted a Code of Business Conduct and Ethics that applies to the Chief Executive Officer, Chief Financial Officer as well as other directors, officers and employees of the Company. This Code of Business Conduct and Ethics is available upon request without charge by contacting Astronics Corporation, Investor Relations at (716) 805-1599. The Code of Business Conduct and Ethics is also available on the Investors section of the Company’s website at www.astronics.com.

ITEM 11. *EXECUTIVE COMPENSATION*

The information contained under the caption “Executive Compensation” and “Summary Compensation Table” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

The information contained under the captions “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters” and “Executive Compensation” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE*

The information contained under the captions “Certain Relationships and Related Transactions and Director Independence” and “Proposal One: Election of Directors” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information contained under the caption “Audit and Non-Audit Fees” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

PART IV

ITEM 15. ***EXHIBITS AND FINANCIAL STATEMENT SCHEDULES***

(a) The documents filed as a part of this report are as follows:

1. *The following financial statements are included:*

   (i) Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015

   (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2017, 2016 and 2015

   (iii) Consolidated Balance Sheets as of December 31, 2017 and 2016

   (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015

   (v) Consolidated Statements of Shareholders’ Equity for the years ended December 31, 2017, 2016 and 2015

   (vi) Notes to Consolidated Financial Statements

   (vii) Reports of Independent Registered Public Accounting Firm

   (viii) Management’s Report on Internal Control Over Financial Reporting

2. *Financial Statement Schedule*

   Schedule II. Valuation and Qualifying Accounts

All other consolidated financial statement schedules are omitted because they are inapplicable, not required, or the information is included elsewhere in the consolidated financial statements or the notes thereto.

3. <u>*Exhibits*</u>

Exhibit No.	Description
3 (a)	Restated Certificate of Incorporation, incorporated by reference to the registrant's 2013 Annual Report on Form 10-K, Exhibit 3(a), filed March 7, 2014 (File No. 000-07087).
(b)	By-Laws, as amended, incorporated by reference to the registrant's 2008 Annual Report on Form 10-K, Exhibit 3(b), filed March 11, 2009 (File No. 000-07087).
(c)	Certificate of Amendment of the Certificate of Incorporation of Astronics Corporation, incorporated by reference to the registrant's Form 8-K, Exhibit 3.1, filed July 1, 2016 (File No. 000-07087).
10.1*	Restated Thrift and Profit Sharing Retirement Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.1, filed March 3, 2011 (File No. 000-07087).
10.2*	2001 Stock Option Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.4, filed March 3, 2011 (File No. 000-07087).
10.3*	Non-Qualified Supplemental Retirement Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.5, filed March 3, 2011 (File No. 000-07087).
10.4*	Employment Termination Benefits Agreement dated December 16, 2003 between Astronics Corporation and Peter J. Gundermann, President and Chief Executive Officer of Astronics Corporation, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.6, filed March 3, 2011 (File No. 000-07087).
10.5*	Employment Termination Benefits Agreement dated December 16, 2003 between Astronics Corporation and David C. Burney, Vice President and Chief Financial Officer of Astronics Corporation, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.7, filed March 3, 2011 (File No. 000-07087).
10.6*	2005 Director Stock Option Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.8, filed March 3, 2011 (File No. 000-07087).
10.7*	Supplemental Retirement Plan, Amended and Restated, March 6, 2012, incorporated by reference to the registrant's 2012 Annual Report on Form 10-K, Exhibit 10.10, filed February 22, 2013 (File No. 000-07087).
10.8*	First Amendment of the Employment Termination Benefits Agreement dated December 30, 2008 between Astronics Corporation and Peter J. Gundermann, President and Chief Executive Officer of Astronics, incorporated by reference to the registrant's 2008 Annual Report on Form 10-K, Exhibit 10.11, filed March 11, 2009 (File No. 000-07087).
10.9*	First Amendment of the Employment Termination Benefits Agreement dated December 30, 2008 between Astronics Corporation and David C. Burney, Vice President and Chief Financial Officer of Astronics Corporation, incorporated by reference to the registrant's 2008 Annual Report on Form 10-K, Exhibit 10.12, filed March 11, 2009 (File No. 000-07087).
10.10*	Employment Termination Benefits Agreement Dated February 18, 2005 between Astronics Corporation and Mark A. Peabody, Executive Vice President of Astronics Advanced Electronic Systems, Inc., incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.13, filed March 3, 2011 (File No. 000-07087).
10.11*	First Amendment of the Employment Termination Benefits Agreement dated December 31, 2008 between Astronics Corporation and Mark A. Peabody, Executive Vice President of Astronics Advanced Electronic Systems, Inc., incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.14, filed March 3, 2011 (File No. 000-07087).
10.12*	Form of Indemnification Agreement as executed by each of Astronics Corporation's Directors and Executive Officers, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.15, filed March 3, 2011 (File No. 000-07087).
10.13*	2011 Employee Stock Option Plan, incorporated by reference to the registrant's Form S-8, Exhibit 4.1 filed on August 4, 2011 (File No. 000-07087).
10.14*	Supplemental Retirement Plan II, incorporated by reference to the registrant's 2012 Annual Report on Form 10-K, Exhibit 10.18, filed February 22, 2013 (File No. 000-07087).
10.15	Stock Purchase Agreement between Astronics Corporation, Peco, Inc., and the shareholders of the Company, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed May 29, 2013 (File No. 000-07087).

10.16	Amendment to the Stock Purchase Agreement between Astronics Corporation, Peco, Inc., and the shareholders of the Company, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed July 19, 2013 (File No. 000-07087).
10.17	Asset Purchase Agreement by and among Astronics AS Corporation, AeroSat Corporation, AeroSat Airborne Internet LLC, AeroSat Avionics, LLC and AeroSat Tech Licensing, LLC, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed October 1, 2013 (File No. 000-07087).
10.18	Sale Agreement relating to PGA Electronic, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed November 5, 2013 (File No. 000-07087).
10.19	Guarantee Agreement relating to PGA Electronic, incorporated by reference to the registrant's Form 8-K, Exhibit 10.2, filed November 5, 2013 (File No. 000-07087).
10.20	Purchase Agreement between EADS North America Inc. and Astronics Corporation dated as of January 20, 2014, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1 filed January 21, 2014 (File No. 000-07087).
10.21	Fourth Amended and Restated Credit Agreement entered into by and among Astronics Corporation, HSBC Bank USA, National Association, Bank of America, N.A. and Manufacturers and Traders Trust Company, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed September 26, 2014 (File No. 000-07087).
10.22	Stock Purchase Agreement between Planesite Holdings Inc., the shareholders of Planesite, Robert Abbinante and Astronics Corporation dated as of December 23, 2014, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1 filed December 24, 2014 (File No. 000-07087).
10.23	Amendment No.1 to the Fourth Amended and Restated Credit Agreement entered into by and among Astronics Corporation, HSBC Bank USA, National Association, Bank of America, N.A., Manufacturers and Traders Trust Company and Wells Fargo Bank, incorporated by reference to the registrant's Form 8-K, Exhibit 10.1, filed January 15, 2016 (File No. 000-07087).
10.24*	Astronics Corporation 2017 Long Term Incentive Plan (incorporated by reference as Exhibit A to the Registrant's Definitive Proxy Statement on Schedule 14A, as filed with the Commission on April 17, 2017).
10.25	Asset Purchase Agreement dated as of March 16, 2017 by and between UJB Acquisition Corp. and Custom Control Concepts LLC filed as Exhibit 10.1 on Form 8-K filed on April 6, 2017 (File No. 000-07087).
10.26	Asset Purchase Agreement entered as of October 26, 2017, by and among Talon Acquisition Corp., Telefonix, Incorporated, Product Development Technologies, LLC, and Paul Burke filed as Exhibit 10.1 on Form 8-K filed on October 27, 2017 (File No. 000-07087).
10.27	Fifth Amended and Restated Credit Agreement entered into by and among Astronics Corporation, HSBC Bank USA, National Association, HSBC Securities (USA) Inc. and Merrill Lynch, Pierce, Fenner & Smith Inc., and Suntrust Bank, filed as Exhibit 10.1 on Form 8-K filed on February 21, 2018 (File No. 000-07087).
21**	Subsidiaries of the Registrant; filed herewith.
23**	Consent of Independent Registered Public Accounting Firm; filed herewith.
31.1**	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002; filed herewith.
31.2**	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002; filed herewith.
32**	Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002; filed herewith.
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

* Identifies a management contract or compensatory plan or arrangement as required by Item 15(a) (3) of Form 10-K.

** Submitted electronically herewith

SCHEDULE II

Valuation and Qualifying Accounts

Year	Description	Balance at the Beginning of Period	Additions Charged to Cost and Expense	Write-Offs/Other	Balance at End of Period
(In thousands)					
2017	Allowance for Doubtful Accounts	$ 602	$ 87	$ 271	$ 960
	Reserve for Inventory Valuation	15,410	2,885	(282)	18,013
	Deferred Tax Valuation Allowance	3,816	4,007	—	7,823
2016	Allowance for Doubtful Accounts	$ 312	$ 388	$ (98)	$ 602
	Reserve for Inventory Valuation	14,594	2,015	(1,199)	15,410
	Deferred Tax Valuation Allowance	2,640	1,176	—	3,816
2015	Allowance for Doubtful Accounts	$ 293	$ 68	$ (49)	$ 312
	Reserve for Inventory Valuation	12,276	3,120	(802)	14,594
	Deferred Tax Valuation Allowance	3,134	—	(494)	2,640

ITEM 16. ***FORM 10-K SUMMARY***

None.

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, on February 28, 2018.

Astronics Corporation

By /s/ Peter J. Gundermann	By /s/ David C. Burney
Peter J. Gundermann President and Chief Executive Officer	David C. Burney, Executive Vice President, Chief Financial Officer

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

Signature	Title	Date
/s/ Peter J. Gundermann Peter J. Gundermann	President and Chief Executive Officer (Principal Executive Officer)	February 28, 2018
/s/ David C. Burney David C. Burney	Executive Vice President, Chief Financial Officer (Principal Financial Officer)	February 28, 2018
/s/ Nancy L. Hedges Nancy L. Hedges	Corporate Controller and Principal Accounting Officer	February 28, 2018
/s/ Raymond W. Boushie Raymond W. Boushie	Director	February 28, 2018
/s/ Robert T. Brady Robert T. Brady	Director	February 28, 2018
/s/ John B. Drenning John B. Drenning	Director	February 28, 2018
/s/ Peter J. Gundermann Peter J. Gundermann	Director	February 28, 2018
/s/ Kevin T. Keane Kevin T. Keane	Director	February 28, 2018
/s/ Robert J. McKenna Robert J. McKenna	Director	February 28, 2018
/s/ Jeffry D. Frisby Jeffry D. Frisby	Director	February 28, 2018
/s/ Warren C. Johnson Warren C. Johnson	Director	February 28, 2018
/s/ Neil Kim Neil Kim	Director	February 28, 2018

EXHIBIT 21

ASTRONICS CORPORATION

SUBSIDIARIES OF THE REGISTRANT

Subsidiary	Ownership Percentage	State (Province), Country of Incorporation
Astronics Test Systems, Inc.	100%	Delaware, USA
Astronics DME LLC	100%	Florida, USA
Astronics AeroSat Corporation	100%	New Hampshire, USA
Luminescent Systems, Inc.	100%	New York, USA
Astronics Air, LLC	100%	New York, USA
Max-Viz, Inc.	100%	Oregon, USA
Peco, Inc.	100%	Oregon, USA
Ballard Technology, Inc.	100%	Washington, USA
Astronics Advanced Electronic Systems Corp.	100%	Washington, USA
LSI - Europe B.V.B.A.	100%	Belgium
Luminescent Systems Canada, Inc.	100%	Quebec, Canada
PGA Electronic s.a.	100%	France
Astronics France	100%	France
Astronics Air II LLC	100%	New Hampshire, USA
Armstrong Aerospace, Inc.	100%	Illinois, USA
Astronics Custom Controls Concepts Inc.	100%	Washington, USA
Astronics Connectivity Systems and Certification Corp.	100%	Illinois, USA
Astronics Europe	100%	France
Product Development Technologies (UK) Limited	100%	United Kingdom
PJSC PDT Ukraine	100%	Ukraine
Huizhou Telefonix Co., Ltd.	100%	China
Alliance Technology HK Limited	100%	Hong Kong

EXHIBIT 23

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(a) Registration Statements (Form S-8 No. 333-139292, Form S-8 No. 333-87463) pertaining to the Astronics Corporation Employee Stock Purchase Plan,
(b) Registration Statement (Form S-8 No. 333-127137) pertaining to the Astronics Corporation 2005 Director Stock Option Plan,
(c) Registration Statement (Form S-8 No. 33-65141) pertaining to the 1993 Director Stock Option Plan,
(d) Registration Statement (Form S-8 No. 333-143564) pertaining to the Astronics Corporation 2001 Stock Option Plan,
(e) Registration Statement (Form S-8 No. 333-176044) pertaining to the Astronics Corporation 2011 Employee Stock Option Plan, and
(f) Registration Statement (Form S-8 No. 333-222010) pertaining to the Astronics Corporation 2017 Long Term Incentive Plan;

of our reports dated February 28, 2018 with respect to the consolidated financial statements and schedule of Astronics Corporation and the effectiveness of internal control over financial reporting of Astronics Corporation included in this Annual Report (Form 10-K) of Astronics Corporation for the year ended December 31, 2017.

/s/ Ernst & Young LLP

Buffalo, New York
February 28, 2018

Exhibit 31.1

Certification of Chief Executive Officer pursuant to Exchange Act rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2001

I, Peter J. Gundermann, President and Chief Executive Officer, certify that:

1. I have reviewed this annual report on Form 10-K of the Astronics 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer 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 registrant's board of directors (or persons performing 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: February 28, 2018

/s/ Peter J. Gundermann

Peter J. Gundermann
Chief Executive Officer

Exhibit 31.2

Certification of Chief Financial Officer pursuant to Exchange Act rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2001

I, David C. Burney, Executive Vice President and Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 10-K of the Astronics 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer 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 registrant's board of directors (or persons performing 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: February 28, 2018

/s/ David C. Burney

David C. Burney
Chief Financial Officer

Exhibit 32

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2001

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2001, the undersigned officers of Astronics Corporation (the "Company") hereby certify that:

The Company's Annual Report on Form 10-K for the year ended December 31, 2017 fully complies with the requirements of section 13(a) or 15(d) of the Securities and Exchange Act of 1934 and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 28, 2018	/s/ Peter J. Gundermann
	Peter J. Gundermann
	Title: Chief Executive Officer
Dated: February 28, 2018	/s/ David C. Burney
	David C. Burney
	Title: Chief Financial Officer

This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by the Company into such filing.