NASDAQ: ATRO

ASTRONICS
CORPORATION

2016 ANNUAL REPORT

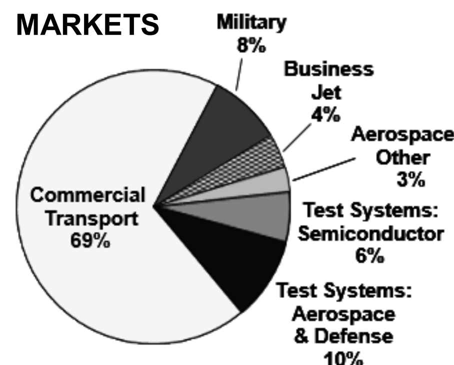
Astronics Corporation (NASDAQ: ATRO) is a leading supplier of advanced technologies and products to the global aerospace, defense and semiconductor industries. Our products and services include advanced, high-performance electrical power generation and distribution systems, seat motion solutions, lighting & safety systems, avionics products, aircraft structures, systems certification and automated test systems.

Through our wholly-owned subsidiaries, we have a reputation for high-quality designs, exceptional responsiveness, strong brand recognition and best-in-class manufacturing practices.

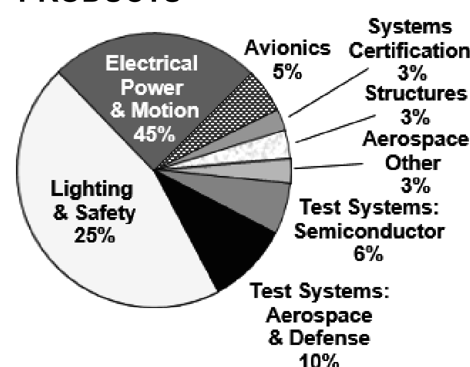
Our strategy is to increase value by developing technologies and capabilities, either internally or through acquisition, and using those capabilities to provide innovative solutions to our targeted markets and other markets where our technology can be beneficial.

2016 SALES BY:

MARKETS



PRODUCTS



($ in thousands)

MARKETS

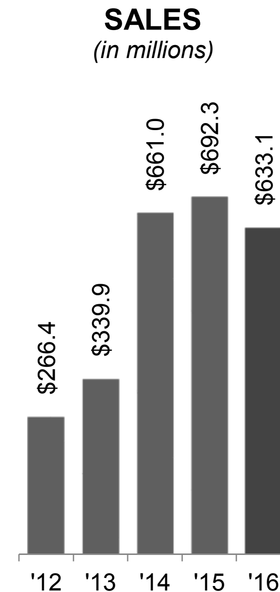
Aerospace Segment	**2016**	2015	2014	2013	2012
Commercial Transport	**$435,552**	$455,569	$396,075	$237,725	$179,104
Military	**54,556**	43,295	42,434	48,669	36,511
Business Jet	**25,407**	32,796	38,819	29,784	29,379
Other	**18,526**	18,078	17,419	14,352	9,961
Aerospace Total	**534,041**	549,738	494,747	330,530	254,955
Test Systems Segment					
Semiconductor	**37,939**	92,136	130,859	-	-
Aerospace & Defense	**61,143**	50,405	35,433	9,407	11,491
Test Systems Total	**99,082**	142,541	166,292	9,407	11,491
TOTAL	**$633,123**	$692,279	$661,039	$339,937	$266,446

PRODUCTS

Aerospace Segment	**2016**	2015	2014	2013	2012
Electrical Power & Motion	**$288,465**	$279,752	$254,455	$188,221	$160,136
Lighting & Safety	**156,871**	157,143	148,212	102,233	69,597
Avionics	**32,761**	56,150	57,879	18,733	15,261
Systems Certification	**16,531**	21,317	-	-	-
Structures	**20,887**	16,372	14,594	6,331	-
Other	**18,526**	19,004	19,607	15,012	9,961
Aerospace Total	**534,041**	549,738	494,747	330,530	254,955
Test Systems Segment					
Semiconductor	**37,939**	92,136	130,859	-	-
Aerospace & Defense	**61,143**	50,405	35,433	9,407	11,491
Test Systems Total	**99,082**	142,541	166,292	9,407	11,491
TOTAL	**$633,123**	$692,279	$661,039	$339,937	$266,446

Dear Fellow Shareholders,

2016 was a challenging year for Astronics, one in which the company navigated some significant transitions. The final numbers are evidence of the challenge: consolidated sales were down 8.5% to $633 million and net income declined 28% to $48 million. While 2016 was our first year of sales decline since 2003, at the same time we made progress addressing the challenges and preparing ourselves for success in the immediate future.



Our results were largely driven by transitions in our avionics and semiconductor test product lines, both the result of customer decisions related to their own market position and both clearly evident early in the year. We spent much of 2016 working on recovery plans, which we expect will begin to bear fruit as 2017 goes on.

In the end, our Aerospace business saw a decline in sales of 2.9%, or $16 million, which was more than explained by the $23 million decline in avionics sales. It should be noted that our Test segment, despite a sales decline of 31% to $99 million, still managed to produce an operating profit of 8.6% of sales. This speaks to the strong actions taken by our Test management team and the inherent margin potential of the business.

Our balance sheet remained strong, with funded debt less than 41% of equity at $137 million and year-end cash at $18 million. We are well capitalized to execute on opportunities we may pursue in the market, including both internal investment and acquisitions that make sense.

> OUR STRATEGY CONTINUES TO BE ONE OF VALUE CREATION THROUGH THE DEVELOPMENT OR ACQUISITION OF NEW TECHNOLOGIES AND INNOVATIVE CAPABILITIES FOR THE MARKETS WE SERVE.

We are excited about the future. We continue to work hard developing and delivering high value innovations to our markets. We continue to enjoy very positive relations with a wide range of high profile customers that span the aerospace and electronics industries. And, we continue to believe that we are well-positioned in our markets and with our customers to achieve continued success.

Thank you for your interest and ongoing support.

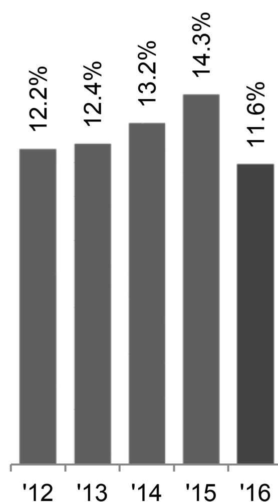
Peter J. Gundermann
President and CEO

FIVE-YEAR PERFORMANCE HIGHLIGHTS

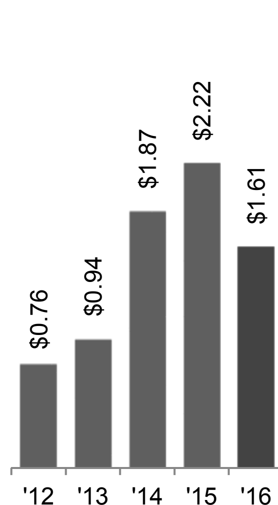
(in thousands, except employee and per share data)	**2016**	2015	2014	2013	2012
PERFORMANCE					
Sales:					
Aerospace Segment	**$ 534,408**	$ 549,738	$ 494,747	$ 330,530	$ 254,955
Test Systems Segment	**$ 99,082**	$ 142,596	$ 166,769	$ 10,103	$ 11,491
Less Intersegment Sales	**$ (367)**	$ (55)	$ (477)	$ (696)	$ -
Total Sales	**$ 633,123**	$ 692,279	$ 661,039	$ 339,937	$ 266,446
Gross Profit	**$ 159,467**	$ 187,942	$ 167,042	$ 87,858	$ 69,442
Gross Margin	***25.2 %***	*27.1 %*	*25.3 %*	*25.8 %*	*26.1 %*
Selling, General and Administrative Expense	**$ 86,328**	$ 89,141	$ 79,680	$ 45,553	$ 36,817
Operating Profit	**$ 73,139**	$ 98,801	$ 87,362	$ 42,305	$ 32,625
Operating Margin	***11.6 %***	*14.3 %*	*13.2 %*	*12.4 %*	*12.2 %*
Net Income	**$ 48,424**	$ 66,974	$ 56,170	$ 27,266	$ 21,874
Diluted Earnings Per Share	**$ 1.61 ***	$ 2.22 *	$ 1.87 *	$ 0.94 *	$ 0.76 *
Weighted Average Shares Outstanding - Diluted	**30,032 ***	30,179 *	29,970 *	29,136 *	28,816 *
Return on Average Shareholders' Equity	**15.2 %**	25.3 %	28.1 %	18.4 %	19.2 %
YEAR END FINANCIAL POSITION					
Total Assets	**$ 604,344**	$ 609,243	$ 562,910	$ 491,271	$ 211,989
Indebtedness	**$ 148,120**	$ 169,789	$ 183,008	$ 200,320	$ 29,983
Shareholders' Equity	**$ 337,449**	$ 300,225	$ 228,177	$ 171,509	$ 125,134
Book Value Per Share	**$ 11.60 ***	$ 10.21 *	$ 7.87 *	$ 6.05 *	$ 4.52 *
OTHER YEAR END DATA					
Depreciation and Amortization	**$ 25,790**	$ 25,309	$ 27,254	$ 11,059	$ 6,905
Capital Expenditures	**$ 13,037**	$ 18,641	$ 40,882	$ 6,868	$ 16,720
Shares Outstanding	**29,098 ***	29,405 *	29,003 *	28,342 *	27,674 *
Number of Employees	**2,304**	2,304	2,041	1,715	1,156

** Adjusted to reflect the impact of the fifteen percent Class B stock distribution to shareholders of record on October 11, 2016*

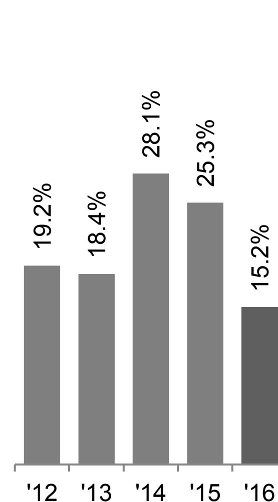
OPERATING MARGIN



DILUTED EARNINGS PER SHARE*



RETURN ON AVERAGE SHAREHOLDERS' EQUITY



SEC Form 10-K

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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, 2016

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 17, 2017, 29,097,719 shares were outstanding, consisting of 21,691,969 shares of Common Stock $.01 par value and 7,405,750 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 $707,000,000 (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 2017 Annual Meeting of Shareholders to be held May 31, 2017 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 supplier of products 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 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 February 28, 2014, Astronics acquired, through its wholly-owned subsidiary ATS, certain assets and liabilities of EADS North America’s Test and Services division, located in Irvine, California. ATS is a leading provider of highly engineered automatic test systems, subsystems and instruments for semiconductor and consumer electronics products to both the commercial and defense industries. ATS is included in our Test Systems segment.

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.

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 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 2016, this segment’s sales were divided 82% to the commercial transport market, 10% to the military aircraft market, 5% 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 2016, this segment’s sales were divided 38% to the semiconductor market and 62% to the aerospace & defense market. Before the acquisition of ATS in February 2014, this segment’s sales were all to the military 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 21.6% of sales in 2016, 21.0% of sales in 2015, and 17.7% of sales in 2014. Sales to Boeing accounted for 15.2% of sales in 2016, 13.0% of sales in 2015, and 14.1% of sales in 2014.

Strategy

Our strategy is to increase our value by developing technologies and capabilities either internally or through acquisition, and using 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 18% 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, 2016, our backlog was $258.0 million. At December 31, 2015, our backlog was $274.4 million. Backlog in the Aerospace segment was $219.1 million at December 31, 2016, of which $197.8 million is expected to be realized in 2017. Backlog in the Test Systems segment was $38.9 million at December 31, 2016, of which $32.6 million is expected to be realized in 2017.

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, keyboard technology 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 $90.2 million in 2016, $90.1 million in 2015 and $76.7 million in 2014.

Employees

We employed approximately 2,300 employees at December 31, 2016. 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.

Stock Distribution

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.

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 2016, we had a concentration of sales to Panasonic and Boeing representing approximately 21.6% and 15.2% 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, 2016, we had approximately $148.1 million of debt outstanding, of which $145.5 million is long-term debt. Changes to our level of debt subsequent to December 31, 2016 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 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.

Our future operating results could be impacted by estimates used to calculate impairment losses on long term 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 term assets in the financial statements. These estimates are integral in the determination of whether a potential 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, 2016, goodwill and purchased intangible assets were approximately 35.3% and 36.7% 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 operations may be adversely affected by information systems interruptions or intrusions. We are dependent on various information technologies throughout our Company to administer, store and support multiple business activities. Disruptions or cyber security attacks such as unauthorized access, malicious software and other intrusions may lead to exposure

of proprietary and confidential information as well as potential data corruption. Any intrusion may cause operational stoppages, diminished competitive advantages through reputational damages and increased operational costs.

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, 2016, 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.

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, 2016, approximately 8% of our debt was at fixed interest rates with the remainder subject to variable interest rates.

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 2016, approximately 7.9% of our sales were made by our subsidiaries in France and Canada. Net assets held by these subsidiaries total $36.8 million at December 31, 2016. 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, 2016, our stock price ranged from a low of $21.76 to a high of $40.70. 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, 2016 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, 2016.

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 has filed an appeal with the United States Court of Appeals for the Federal Circuit. The Company believes that it has valid defenses to Lufthansa's claims and will vigorously contest the appeal. 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, 2016.

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, 2016, we own or lease 1.0 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	39,500	136,500
East Aurora, NY	125,000	—	125,000
Ft. Lauderdale, FL	96,000	—	96,000
Lebanon, NH	80,000	—	80,000
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
Aerospace Square Feet	684,000	194,500	878,500
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	684,000	344,500	1,028,500

* - 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***

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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 17, 2017, was 825 for Common Stock and 2,286 for Class B Stock.

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

2015	High	Low
First	$ 56.75	$ 38.56
Second	$ 57.92	$ 50.90
Third	$ 53.69	$ 29.34
Fourth	$ 36.94	$ 30.10

The Company has not paid any cash dividends in the three-year period ended December 31, 2016. 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.

The following table summarizes our purchases of our common stock for the quarter ended December 31, 2016.

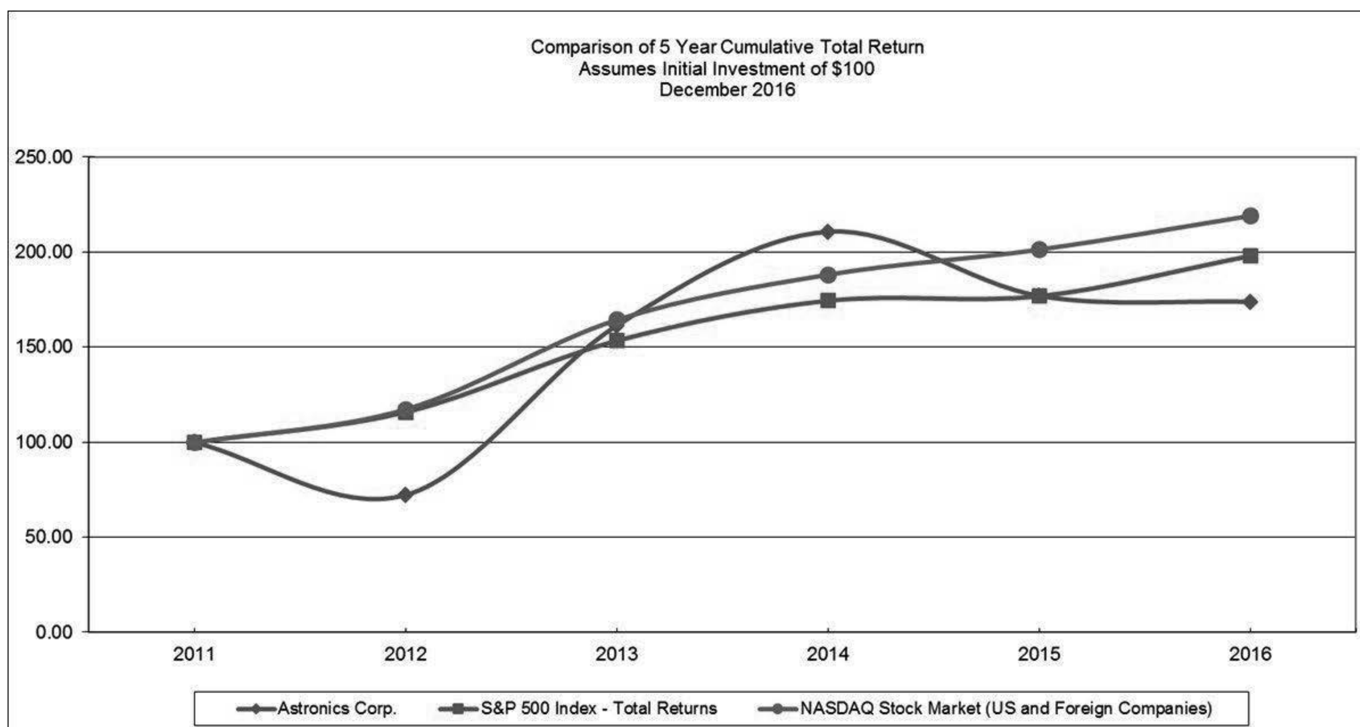
Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Dollar Value of Shares that may yet be Purchased Under the Program (1)
November 1, 2016 - November 26, 2016 (2)	22,488	$34.64	5,731	$32,382,000
November 27, 2016 - December 31, 2016 (3)	1,118	$37.62	—	$32,382,000

(1) On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to $50 million of common stock.

(2) There were 16,757 shares transferred to us by employees in connection with the exercise of stock options. The remainder were shares purchased in the open market pursuant to our repurchase program.

(3) There were 1,118 shares transferred to us by employees in connection with the exercise of stock options.

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, 2011:



		2011	2012	2013	2014	2015	2016
Astronics Corp.	Return %	—	(27.61)	122.90	30.51	(15.99)	(1.75)
	Cum $	100.00	72.39	161.37	210.61	176.92	173.82
S&P 500 Index - Total Returns	Return %	—	16.00	32.39	13.69	1.38	11.96
	Cum $	100.00	116.00	153.57	174.60	177.01	198.18
NASDAQ Stock Market (US and Foreign Companies)	Return %	—	17.41	40.10	14.43	6.99	8.82
	Cum $	100.00	117.41	164.50	188.23	201.40	219.15

ITEM 6. *SELECTED FINANCIAL DATA*

Five-Year Performance Highlights

(Amounts in thousands, except for employee and per share data)	2016	2015 (4)	2014 (3)	2013 (2)	2012
RESULTS OF OPERATIONS:					
Sales	$ 633,123	$ 692,279	$ 661,039	$ 339,937	$ 266,446
Net Income	$ 48,424	$ 66,974	$ 56,170	$ 27,266	$ 21,874
Net Margin	7.6%	9.7%	8.5%	8.0%	8.2%
Diluted Earnings Per Share (1)	$ 1.61	$ 2.22	$ 1.87	$ 0.94	$ 0.76
Weighted Average Shares Outstanding – Diluted (1)	30,032	30,179	29,970	29,136	28,816
Return on Average Equity	15.2%	25.3%	28.1%	18.4%	19.2%
YEAR-END FINANCIAL POSITION:					
Working Capital	$ 168,513	$ 145,735	$ 136,602	$ 125,961	$ 60,042
Total Assets	$ 604,344	$ 609,243	$ 562,910	$ 491,271	$ 211,989
Indebtedness	$ 148,120	$ 169,789	$ 183,008	$ 200,320	$ 29,983
Shareholders' Equity	$ 337,449	$ 300,225	$ 228,177	$ 171,509	$ 125,134
Book Value Per Share (1)	$ 11.60	$ 10.21	$ 7.87	$ 6.05	$ 4.52
OTHER YEAR-END DATA:					
Depreciation and Amortization	$ 25,790	$ 25,309	$ 27,254	$ 11,059	$ 6,905
Capital Expenditures	$ 13,037	$ 18,641	$ 40,882	$ 6,868	$ 16,720
Shares Outstanding (1)	29,098	29,405	29,003	28,342	27,674
Number of Employees	2,304	2,304	2,041	1,715	1,156

(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.

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 using 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 ten principal operating facilities with one located in New York State, Florida, Illinois, Oregon, Quebec, Canada and Montierchaume, France; and two in New Hampshire and two in 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, 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 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.

On February 28, 2014, Astronics, through its wholly owned subsidiary ATS, completed the acquisition of substantially all of the assets and liabilities of EADS North America's Test and Services division. ATS is located in Irvine, California and is a leading provider of highly engineered automatic test systems, subsystems and instruments for the semiconductor, consumer electronics, commercial aerospace & defense industries. The purchase price was approximately $69.4 million in cash.

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 $435.6 million or 68.8% of our consolidated sales in 2016.

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 8.6% of our consolidated revenue and amounted to $54.6 million in 2016.

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 4.0% of our consolidated revenue in 2016 and amounted to $25.4 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 2017 due to global macroeconomic conditions. 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 2.9% of our total revenue or $18.5 million in 2016.

Tests Systems Products

Our Test Systems segment accounted for approximately 15.7% of our consolidated sales in 2016 and amounted to $99.1 million. Sales to the semiconductor market were approximately $37.9 million. Sales to the aerospace & defense market were approximately $61.1 million in 2016.

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 of our 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 $20.7 million, $17.2 million and $2.7 million for the years ended December 31, 2016, 2015 and 2014, 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, 2016, we had approximately $115.2 million of goodwill. As of December 31, 2015, we had approximately $115.4 million of goodwill. The change in goodwill is due to currency translation adjustments.

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.

In measuring the impairment loss, the implied fair value of goodwill is determined by assigning a fair value to all of the reporting unit’s assets and liabilities, including any unrecognized intangible assets, as if the reporting unit had been acquired in a business combination at fair value. If the carrying amount of the reporting unit goodwill exceeds its implied fair value, an impairment loss would be recognized in an amount equal to that excess.

In 2016, we performed quantitative assessments for the eight reporting units which have goodwill and concluded that it is more likely than not that their fair values exceed their carrying values. Based on our quantitative assessments of our reporting units, we concluded that goodwill was not impaired.

Amortized Intangible Asset Impairment Testing

Amortizable intangible assets with a carrying value of $98.1 million at December 31, 2016 and $108.3 million at December 31, 2015 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 2016, 2015 or 2014.

Depreciable Asset Impairment Testing

Property, plant and equipment with a carrying value of $122.8 million at December 31, 2016 and $124.7 million at December 31, 2015 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 2016, 2015 or 2014.

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 market 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, 2016, our reserve for inventory valuation was $15.4 million, or 11.7% of gross inventory. At December 31, 2015, our reserve for inventory valuation was $14.6 million, or 11.2% 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, 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.

As of December 31, 2015, we had net deferred tax liabilities of $13.4 million. Included in the net deferred tax liabilities are approximately $20.5 million in deferred tax assets net of a $2.6 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 2016 and 2015.

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 2016 was $1.9 million and in 2015 was $2.1 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 2016 was 4.45% compared with 4.05% in 2015. We will use a discount rate of 4.20% in determining our 2017 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 3-5%. 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 2017 by $0.2 million. If we had assumed annual wage increases of 4-6%, our 2017 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 $2.3 million for 2016, $2.3 million for 2015 and $1.7 million for 2014. 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 insignificant in 2016, and were $0.4 million and $0.3 million in 2015 and 2014, respectively.

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, such as the earn-out provision included in our 2013 acquisition of AeroSat. 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 2015, acquisitions added approximately $4.7 million in property, plant and equipment and $25.1 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 2015 and 2014.

CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(Dollars in thousands)	2016	2015 (2)	2014 (1)
Sales	$ 633,123	$ 692,279	$ 661,039
Gross Margin	25.2%	27.1%	25.3%
SG&A Expenses as a Percentage of Sales	13.6%	12.9%	12.1%
Interest Expense	$ 4,354	$ 4,751	$ 8,255
Effective Tax Rate	29.6%	28.8%	29.0%
Net Income	$ 48,424	$ 66,974	$ 56,170

(1) Our results of operations for 2014 include the operations of ATS, beginning February 28, 2014.

(2) Our results of operations for 2015 include the operations of Armstrong, beginning January 14, 2015.

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

CONSOLIDATED OVERVIEW OF OPERATIONS

2016 Compared With 2015

Consolidated sales for 2016 decreased by $59.2 million, or 8.5%, to $633.1 million. 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 $90.2 million in 2016, consistent with $90.1 million in 2015. As a percent of sales, E&D was 14.2% 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.

2015 Compared With 2014

Consolidated sales for 2015 increased by $31.2 million, or 4.7%, to $692.3 million, from $661.0 million in 2014. The acquisition of Armstrong contributed $25.5 million to consolidated sales, while consolidated organic sales increased $5.7 million, or 0.9%.

Consolidated cost of products sold increased $10.3 million to $504.3 million in 2015 from $494.0 million in the prior year. The increase was due primarily to the incremental cost of products sold associated with Armstrong of $20.9 million and increased E&D costs offset by lower step-up expense when compared to the same period last year. E&D costs were 13.0% of sales, or $90.1 million, which included $6.8 million for Armstrong, compared with $76.7 million, or 11.6% of sales, in the prior year. Cost of products sold in 2014 included $19.4 million related to inventory step-up expense, as compared to $1.0 million in 2015. Consolidated cost of products sold as a percentage of sales was 72.9% in 2015 compared with 74.7% in the prior year.

SG&A expenses were $89.1 million, or 12.9% of sales, in 2015 compared with $79.7 million, or 12.1% of sales, in the prior year. The increase was due primarily to the incremental SG&A costs of Armstrong, which added approximately $5.7 million to SG&A in 2015, including $2.2 million of amortization expense for acquired intangible assets of that business. SG&A expenses in 2014 were positively affected by a $5.0 million fair value writedown of a contingent consideration liability related to prior acquisitions, compared with a writedown of $1.8 million in 2015. These increases were partially offset by a decrease in amortization expense for acquired intangible assets of ATS of $4.7 million.

Interest expense decreased in 2015 compared to 2014 due to decreased debt levels.

Income Taxes

Our effective tax rates for 2016, 2015 and 2014 were 29.6%, 28.8% and 29.0%, 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:

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.

2014:

1. Recognition of $1.8 million of 2014 U.S. R&D tax credits as well as $1.6 million of U.S. R&D tax credits recognized relating to prior years.
2. Permanent differences, primarily the impact of the Domestic Production Activities Deduction.
3. Foreign tax credits.

2017 Outlook

We expect consolidated sales in 2017 to be between $640.0 million and $720.0 million. Our consolidated backlog at December 31, 2016 was $258.0 million of which approximately $230.4 million is expected to ship in 2017.

We expect our capital equipment spending in 2017 to be in the range of $17.0 million to $22.0 million. E&D costs are expected to continue at roughly the same rate as 2016.

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)	2016	2015	2014
Sales	$ 534,041	$ 549,738	$ 494,747
Operating Profit	$ 77,966	$ 85,103	$ 79,753
Operating Margin	14.6%	15.5%	16.1%

	2016	2015
Total Assets	$ 500,892	$ 510,884
Backlog	$ 219,146	$ 212,651

Sales by Market	2016	2015	2014
Commercial Transport	$ 435,552	$ 455,569	$ 396,075
Military	54,556	43,295	42,434
Business Jet	25,407	32,796	38,819
Other	18,526	18,078	17,419
	$ 534,041	$ 549,738	$ 494,747

Sales by Product Line	2016	2015	2014
Electrical Power & Motion	$ 288,465	$ 279,752	$ 254,455
Lighting & Safety	156,871	157,143	148,212
Avionics	32,761	56,150	57,879
Systems Certification	16,531	21,317	—
Structures	20,887	16,372	14,594
Other	18,526	19,004	19,607
	$ 534,041	$ 549,738	$ 494,747

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.

2015 Compared With 2014

Aerospace segment sales increased by $55.0 million, or 11.1%, when compared with the prior year, to $549.7 million. Organic sales grew 6.0%, or $29.5 million, and sales from Armstrong added $25.5 million.

Aerospace sales growth year-to-date was driven by increased Electrical Power & Motion sales, which increased $25.3 million, or 9.9%. The increase in this product line was driven by in-seat power products, which increased 14.9% in 2015. The Lighting & Safety product line increased $8.9 million, or 6.0%, due to increased passenger service unit sales. Systems Certification sales was $21.3 million due to the January acquisition of Armstrong. The other Aerospace product lines comprised the remainder of the variance.

Aerospace operating profit for 2015 was $85.1 million, or 15.5% of sales, compared with $79.8 million, or 16.1% of sales in the prior year. Operating leverage gained on increased volume for the organic business was partially offset by higher organic E&D costs of approximately $6.2 million and lower operating margins from Armstrong. Aerospace SG&A expense increased $6.6 million in 2015 as compared with 2014. Incremental SG&A from Armstrong was $5.8 million, including $2.2 million of intangible asset amortization expense for acquired intangible assets. Operating profit in 2014 included inventory step-up costs of $2.6 million that reduced normal operating margins.

***2017* Outlook for Aerospace –** We expect 2017 Aerospace segment sales to be in the range of $560.0 million to $600.0 million. The Aerospace segment's backlog at December 31, 2016 was $219.1 million, compared to $212.7 million at December 31, 2015. Approximately $197.8 million of the backlog at December 31, 2016 is expected to be shipped over the next 12 months.

TEST SYSTEMS SEGMENT

(in thousands, except percentages)	2016	2015	2014
Sales	$ 99,082	$ 142,541	$ 166,292
Operating Profit (Loss)	$ 8,507	$ 25,529	$ 12,401
Operating Margin	8.6%	17.9%	7.4%

	2016	2015
Total Assets	$ 76,575	$ 64,934
Backlog	$ 38,887	$ 61,713

Sales by Market	2016	2015	2014
Semiconductor	$ 37,939	$ 92,136	$ 130,859
Aerospace & Defense	61,143	50,405	35,433
	$ 99,082	$ 142,541	$ 166,292

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 $11.7 million in 2016 compared with $12.2 million in the prior year.

2015 Compared With 2014

Sales in 2015 decreased 14.3% to $142.5 million compared with sales of $166.3 million for 2014, due to lower sales to the Semiconductor market. Sales to the Semiconductor market decreased $38.7 million compared with 2014, which was partially offset by increased sales of $14.9 million to the Aerospace & Defense market.

Operating profit was $25.5 million, or 17.9% of sales, compared with $12.4 million, or 7.4% of sales, in the prior year. Operating profit for 2014 was negatively impacted by non-recurring purchase accounting related inventory step-up costs of $16.8 million, and $1.7 million of charges related to work force reductions. Additionally, amortization expense in 2014 related to the ATS acquisition was approximately $6.0 million compared with $1.3 million in 2015. E&D costs were approximately $12.2 million in 2015, and $11.8 million in 2014.

2017 Outlook for Test Systems – We expect 2017 Test System segment sales to be in the range of $80.0 million to $120.0 million. The Test System segment's backlog at December 31, 2016 was $38.9 million, compared with $61.7 million at December 31, 2015. Approximately $32.6 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, 2016:

	Payments Due by Period				
(In thousands)	Total	2017	2018-2019	2020-2021	After 2021
Long-term Debt	$ 148,120	$ 2,636	$ 4,445	$ 140,145	$ 894
Purchase Obligations	98,478	97,570	908	—	—
Interest on Long-term Debt	15,740	4,010	7,665	4,053	12
Supplemental Retirement Plan and Post Retirement Obligations	22,554	414	827	812	20,501
Operating Leases	5,885	2,380	3,368	137	—
Other Long-term Liabilities	123	9	23	29	62
Total Contractual Obligations	$ 290,900	$ 107,019	$ 17,236	$ 145,176	$ 21,469

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, 2016. 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, Ballard, ATS, Armstrong, and LSI Canada.

LIQUIDITY AND CAPITAL RESOURCES

(in thousands)	2016	2015	2014
Net cash provided (used) by:			
Operating Activities	$ 48,854	$ 78,501	$ 99,874
Investing Activities	$ (14,622)	$ (73,586)	$ (109,120)
Financing Activities	$ (34,806)	$ (6,725)	$ (23,113)

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 $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 increased 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.

Cash provided by operating activities was $99.9 million in 2014. This is an increase of $50.4 million from 2013 and was primarily a result of higher net income as adjusted for non-cash expenses and the impact of decreases in net operating assets in 2014 when compared with 2013 net of the effects from acquisitions of business.

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 2016 was $14.6 million, primarily related to purchases of property, plant and equipment 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 property, plant and equipment ("PP&E") used $18.6 million.

Cash used for investing activities in 2014 was $109.1 million. The acquisition of ATS used approximately $69.4 million of cash in 2014 and purchases of PP&E used $40.9 million, primarily related to the acquisition and modification of the new buildings for our Peco operation in Clackamas, Oregon ($24.7 million).

Our expectation for 2017 is that we will invest between $17.0 million and $22.0 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. Our obligations under our Credit Agreement are jointly and severally guaranteed by each of our domestic subsidiaries. The obligations are secured by a first priority lien on substantially all of the Company's and the guarantors' assets and 100% of the issued and outstanding equity interest of each subsidiary.

The Company's Third Amended and Restated Credit Agreement provided for a $75 million five-year revolving credit facility and a $190 million five-year term loan, both expiring on June 30, 2018. The facilities carried an interest rate of LIBOR plus between 2.25% and 3.50%, depending on the Company's leverage ratio as defined in the Credit Agreement. In addition, the Company was required to pay a commitment fee of between 0.25% and 0.50% on the unused portion of the total credit commitment for the preceding quarter, based on the Company's leverage ratio under the credit agreement.

On February 28, 2014, with the funding of the acquisition of ATS, the Company amended its existing credit facility to exercise its option to increase the revolving credit commitment. The credit agreement provided for a $125 million, five-year revolving credit facility maturing on June 30, 2018, of which $58.0 million was drawn to finance the acquisition. In addition, the Company was required to pay a commitment fee quarterly at a rate of between 0.25% and 0.50% per annum on the unused portion of the total revolving credit commitment, based on the Company's leverage ratio.

On September 26, 2014, the Company modified and extended its existing credit facility (the "Original Facility") by entering into the Fourth Amended and Restated Credit Agreement (the "Credit Agreement"). On the closing date, there were $180.5 million of term loans, $6.0 million of revolving loans outstanding under the Original Facility. Pursuant to the Agreement, the Original Facility was replaced with a $350 million revolving credit line with the option to increase the line by up to $150 million. The outstanding balances in the Original Facility were rolled into the Agreement on the date of entry. In addition, the maturity date of the loans under the Agreement was September 26, 2019. The credit facility allocates up to $20 million of the $350 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2016, outstanding letters of credit totaled $1.1 million.

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

Covenants in the Agreement were modified to where the maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) is 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 will pay interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.375% and 2.25% based upon the Company's leverage ratio. The Company will also pay a commitment fee to the Lenders in an amount equal to between 0.175% and 0.35% on the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company is required to maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement. The

Company's interest coverage ratio was 29.5 to 1 at December 31, 2016. The Company's leverage ratio was 1.38 to 1 at December 31, 2016. The Company is in compliance with all financial and other covenants at December 31, 2016.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the 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, give the Agent the option to declare all such amounts immediately due and payable.

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 Buyback Program, as further described below, 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. In February 2014, we borrowed $58.0 million to fund the acquisition of ATS. We also terminated our outstanding Industrial Revenue Bonds, which were repaid in full in November 2014 ($7.6 million).

The Company's cash needs for working capital, debt service and capital equipment during 2017 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 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 Buyback Program may be suspended or discontinued at any time. The timing and the amount of any repurchases will be determined based on an evaluation of market conditions, share price and other factors.

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, 2016, the Company's backlog was approximately $258.0 million compared with approximately $274.4 million at December 31, 2015.

RELATED-PARTY TRANSACTIONS

Information regarding certain relationships and related transactions is incorporated herein by reference to the information included in the Company's 2017 Proxy Statement which will be filed with the Commission within 120 days after the end of the Company's 2016 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 $9.3 million at December 31, 2016. Annual disbursements transacted in Canadian dollars were approximately $14.9 million in 2016. A 10% change in the value of the U.S. dollar versus the Canadian dollar would have had an insignificant impact to 2016 net income; however it could be significant in the future.

Net assets held in or measured in Euros amounted to $27.5 million at December 31, 2016. Disbursements transacted in Euros in 2016 were approximately $32.6 million. A 10% change in the value of the U.S. dollar versus the Euros would have had an insignificant impact to 2016 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 $136.0 million at December 31, 2016. A change of 1% in interest rates of all variable rate debt would impact annual net income by approximately $0.9 million.

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of Astronics Corporation

We have audited the accompanying consolidated balance sheets of Astronics Corporation as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2016. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Astronics Corporation at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Astronics Corporation’s internal control over financial reporting as of December 31, 2016, 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 23, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Buffalo, New York
February 23, 2017

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, 2016 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, 2016.

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 23, 2017

Peter J. Gundermann
President & Chief Executive Officer
(Principal Executive Officer)

/s/ David C. Burney — February 23, 2017

David C. Burney
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of Astronics Corporation

We have audited Astronics Corporation's internal control over financial reporting as of December 31, 2016, 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). Astronics Corporation's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, 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.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

In our opinion, Astronics Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Astronics Corporation as of December 31, 2016 and 2015 and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2016 of Astronics Corporation and our report dated February 23, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Buffalo, New York
February 23, 2017

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Year Ended December 31, 2016	2015	2014
Sales	$ 633,123	$ 692,279	$ 661,039
Cost of Products Sold	473,656	504,337	493,997
Gross Profit	159,467	187,942	167,042
Selling, General and Administrative Expenses	86,328	89,141	79,680
Income from Operations	73,139	98,801	87,362
Interest Expense, Net of Interest Income	4,354	4,751	8,255
Income Before Income Taxes	68,785	94,050	79,107
Provision for Income Taxes	20,361	27,076	22,937
Net Income	$ 48,424	$ 66,974	$ 56,170
Basic Earnings Per Share	$ 1.66	$ 2.29	$ 1.96
Diluted Earnings Per Share	$ 1.61	$ 2.22	$ 1.87

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)	Year Ended December 31, 2016	2015	2014
Net Income	$ 48,424	$ 66,974	$ 56,170
Other Comprehensive (Loss) Income:			
Foreign Currency Translation Adjustments	(626)	(4,617)	(4,638)
Mark to Market Adjustments for Derivatives – Net of Tax	—	—	69
Retirement Liability Adjustment – Net of Tax	196	1,502	(3,769)
Other Comprehensive (Loss) Income	(430)	(3,115)	(8,338)
Comprehensive Income	$ 47,994	$ 63,859	$ 47,832

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data)	December 31, 2016	December 31, 2015
ASSETS		
Current Assets:		
Cash and Cash Equivalents	$ 17,901	$ 18,561
Accounts Receivable, Net of Allowance for Doubtful Accounts	109,415	95,277
Inventories	116,597	115,467
Prepaid Expenses and Other Current Assets	11,160	20,662
Total Current Assets	255,073	249,967
Property, Plant and Equipment, at Cost:		
Land	11,112	11,145
Buildings and Improvements	79,191	78,989
Machinery and Equipment	93,683	89,514
Construction in Progress	8,182	3,282
	192,168	182,930
Less Accumulated Depreciation	69,356	58,188
Net Property, Plant and Equipment	122,812	124,742
Other Assets	13,149	10,889
Intangible Assets, Net of Accumulated Amortization	98,103	108,276
Goodwill	115,207	115,369
Total Assets	$ 604,344	$ 609,243
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Current Maturities of Long-term Debt	$ 2,636	$ 2,579
Accounts Payable	25,070	27,138
Accrued Payroll and Employee Benefits	24,743	24,036
Accrued Income Taxes	62	195
Other Accrued Expenses	10,881	11,527
Customer Advanced Payments and Deferred Revenue	23,168	38,757
Total Current Liabilities	86,560	104,232
Long-term Debt	145,484	167,210
Supplemental Retirement Plan and Other Liabilities for Pension Benefits	22,140	20,935
Other Liabilities	1,414	1,674
Deferred Income Taxes	11,297	14,967
Total Liabilities	266,895	309,018
Shareholders' Equity:		
Common Stock, $.01 par value, Authorized 40,000,000 Shares 21,955,414 Shares Issued and 21,432,282 Outstanding at December 31, 2016 19,348,678 Shares Issued and Outstanding at December 31, 2015	220	194
Convertible Class B Stock, $.01 par value, Authorized 10,000,000 Shares 7,665,437 Shares Issued and Outstanding at December 31, 2016 10,055,904 Shares Issued and Outstanding at December 31, 2015	77	100
Additional Paid-in Capital	64,752	57,827
Accumulated Other Comprehensive Loss	(15,494)	(15,064)
Retained Earnings	305,512	257,168
Treasury Stock; 523,132 Shares in 2016	(17,618)	—
Total Shareholders' Equity	337,449	300,225
Total Liabilities and Shareholders' Equity	$ 604,344	$ 609,243

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Year Ended December 31, 2016	2015	2014
Cash Flows from Operating Activities			
Net Income	$ 48,424	$ 66,974	$ 56,170
Adjustments to Reconcile Net Income to Cash Provided By Operating Activities, Excluding the Effects of Acquisitions:			
Depreciation and Amortization	25,790	25,309	27,254
Provision for Non-Cash Losses on Inventory and Receivables	2,404	3,187	1,959
Stock Compensation Expense	2,281	2,274	1,730
Deferred Tax Benefit	(4,756)	(252)	(4,677)
Non-cash Adjustment to Contingent Consideration	—	(1,751)	(4,971)
Other	165	(294)	268
Cash Flows from Changes in Operating Assets and Liabilities, net of the Effects from Acquisitions of Businesses:			
Accounts Receivable	(14,622)	(729)	(18,850)
Inventories	(2,671)	(2,537)	25,732
Prepaid Expenses and Other Current Assets	108	(799)	(2,806)
Accounts Payable	(2,000)	(2,168)	(8,005)
Accrued Expenses	(174)	3,738	6,826
Income Taxes Payable	7,926	(9,266)	(4,084)
Customer Advanced Payments and Deferred Revenue	(15,539)	(7,485)	22,055
Supplemental Retirement Plan and Other Liabilities	1,518	2,300	1,273
Cash Provided By Operating Activities	48,854	78,501	99,874
Cash Flows from Investing Activities			
Acquisition of Business, Net of Cash Acquired	—	(52,276)	(68,201)
Capital Expenditures	(13,037)	(18,641)	(40,882)
Other	(1,585)	(2,669)	(37)
Cash Used For Investing Activities	(14,622)	(73,586)	(109,120)
Cash Flows from Financing Activities			
Proceeds From Long-term Debt	20,000	55,000	245,894
Principal Payments on Long-term Debt	(41,835)	(67,694)	(275,544)
Purchase of Outstanding Shares for Treasury	(17,618)	—	—
Debt Acquisition Costs	—	—	(573)
Proceeds from Exercise of Stock Options	3,813	2,996	1,848
Excess Tax Benefit from Exercise of Stock Options	834	2,973	5,262
Cash Used For Financing Activities	(34,806)	(6,725)	(23,113)
Effect of Exchange Rates on Cash	(86)	(826)	(1,079)
Decrease in Cash and Cash Equivalents	(660)	(2,636)	(33,438)
Cash and Cash Equivalents at Beginning of Year	18,561	21,197	54,635
Cash and Cash Equivalents at End of Year	$ 17,901	$ 18,561	$ 21,197
Supplemental Cash Flow Information:			
Interest Paid	$ 4,536	$ 4,734	$ 7,816
Income Taxes Paid, Net of Refunds	$ 15,898	$ 32,990	$ 26,619

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Year Ended December 31,		
(In thousands)	2016	2015	2014
Common Stock			
Beginning of Year	$ 194	$ 166	$ 133
Exercise of Stock Options and Stock Compensation Expense – Net of Taxes	1	2	2
Class B Stock Converted to Common Stock	25	26	31
End of Year	$ 220	$ 194	$ 166
Convertible Class B Stock			
Beginning of Year	$ 100	$ 124	$ 152
Exercise of Stock Options and Stock Compensation Expense – Net of Taxes	2	2	3
Class B Stock Converted to Common Stock	(25)	(26)	(31)
End of Year	$ 77	$ 100	$ 124
Additional Paid in Capital			
Beginning of Year	$ 57,827	$ 49,588	$ 40,720
Exercise of Stock Options and Stock Compensation Expense - Net of Taxes	6,925	8,239	8,868
End of Year	$ 64,752	$ 57,827	$ 49,588
Accumulated Other Comprehensive Loss			
Beginning of Year	$ (15,064)	$ (11,949)	$ (3,611)
Foreign Currency Translation Adjustments	(626)	(4,617)	(4,638)
Mark to Market Adjustments for Derivatives – Net of Taxes	—	—	69
Retirement Liability Adjustment – Net of Taxes	196	1,502	(3,769)
End of Year	$ (15,494)	$ (15,064)	$ (11,949)
Retained Earnings			
Beginning of Year	$ 257,168	$ 190,248	$ 134,115
Net income	48,424	66,974	56,170
Cash Paid in Lieu of Fractional Shares from Stock Distribution	(80)	(54)	(37)
End of Year	$ 305,512	$ 257,168	$ 190,248
Treasury Stock			
Beginning of Year	$ —	$ —	$ —
Purchase of Shares	(17,618)	—	—
Retirement of Treasury Shares	—	—	—
End of Year	$ (17,618)	$ —	$ —
Total Shareholders' Equity	$ 337,449	$ 300,225	$ 228,177

See notes to consolidated financial statements

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY, COUNTINUED

	Year Ended December 31,		
(Share data, in thousands)	2016	2015	2014
Common Stock			
Beginning of Year	19,349	16,608	13,268
Exercise of Stock Options	151	168	216
Class B Stock Converted to Common Stock	2,455	2,573	3,124
End of Year	21,955	19,349	16,608
Convertible Class B Stock			
Beginning of Year	10,055	12,447	15,287
Exercise of Stock Options	65	181	284
Class B Stock Converted to Common Stock	(2,455)	(2,573)	(3,124)
End of Year	7,665	10,055	12,447
Treasury Stock			
Beginning of Year	—	—	—
Purchase of Shares	523	—	—
End of Year	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 supplier of products 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 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").

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.

At December 31, 2016, 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.

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, as a result of the acquisition of ATS, certain of our contracts involve multiple elements (such as equipment and service). Service revenues were not material for the years ended December 31, 2016, 2015 and 2014. 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 $20.7 million, $17.2 million and $2.7 million for the years ended December 31, 2016, 2015 and 2014, 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 $90.2 million in 2016, $90.1 million in 2015 and $76.7 million in 2014. Selling, general and administrative ("SG&A") expenses include costs primarily related to our sales, marketing and administrative departments.

Shipping and Handling

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

Stock Distribution

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.

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

Inventories are stated at the lower of cost or market, cost being determined in accordance with the first-in, first-out method or standard 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.

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 in income. Replacements and improvements are capitalized.

Depreciation expense was approximately $14.3 million, $13.3 million and $10.6 million in 2016, 2015 and 2014, respectively.

Buildings acquired under capital leases amounted to $10.5 million ($14.3 million, net of $3.8 million of accumulated amortization) and $12.3 million ($14.8 million, net of $2.5 million accumulated amortization) at December 31, 2016 and 2015, respectively. Future minimum lease payments associated with these capital leases are expected to be $2.6 million in 2017, $2.6 million in 2018, $2.0 million in 2019, $2.1 million in 2020 and $2.2 million in 2021.

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 ten reporting units, however only eight reporting units have goodwill and were subject to the goodwill impairment test. The annual testing date for the impairment test is 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. To determine the amount of the impairment loss, the implied fair value of goodwill is determined by assigning a fair value to all of the reporting unit’s assets and liabilities, including any unrecognized intangible assets, as if the reporting unit had been acquired in a business combination at fair value. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss would be recognized in an amount equal to that excess.

There were no impairment charges in 2016, 2015 or 2014.

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 2016, 2015 or 2014.

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.

Derivatives

The accounting for changes in the fair value of derivatives depends on the intended use and resulting designation. The Company's use of derivative instruments was limited to cash flow hedges for interest rate risk associated with long-term debt. All such instruments were terminated in 2014. Interest rate swaps were used to adjust the proportion of total debt that is subject to variable and fixed interest rates. The interest rate swaps were designated as hedges of the amount of future cash flows related to interest payments on variable-rate debt that, in combination with the interest payments on the debt, converted a portion of the variable-rate debt to fixed-rate debt. The Company recorded all derivatives on the balance sheet at fair value. The related gains or losses, to the extent the derivatives were effective as a hedge, were deferred in shareholders' equity as a component of Accumulated Other Comprehensive Income (Loss) ("AOCI") and reclassified into earnings at the time interest expense was recognized on the associated long-term debt. Any ineffectiveness was recorded in the Consolidated Statements of Operations.

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 2016, $1.0 million in 2015 and insignificant in 2014.

Dividends

The Company has not paid any cash dividends in the three-year period ended December 31, 2016.

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 2015 and 2014.

Newly Adopted and Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-9, *Revenue from Contracts with Customers*. This new standard is effective for reporting periods beginning after December 15, 2017, pursuant to the issuance of ASU 2015-14, *Revenue from Contracts with Customers: Deferral of Effective Date* issued in August 2015. The comprehensive new standard will supersede existing revenue recognition guidance and require revenue to be recognized when promised goods or services are transferred to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. Adoption of the new rules could affect the timing of revenue recognition for certain transactions. The guidance permits two implementation approaches, one requiring retrospective application of the new standard with restatement of prior years and one requiring prospective application of the new standard with disclosure of results under old standards. The Company will adopt the new standard on January 1, 2018, using the modified retrospective transition method.

The adoption of this amendment may 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. The Company has identified its revenue streams, reviewed the initial impacts of adopting the new standard on those revenue streams, and appointed a project management leader. The Company continues to evaluate the quantitative and qualitative impacts of the standard.

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 adoption of the standard is not expected to have a material effect on the Company's financial position, results of operations or cash flows.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*. The new standard is effective for reporting periods beginning after December 15, 2016 and early adoption is permitted. With respect to income taxes, under current guidance, when a share-based payment award such as a stock option is granted to an employee, the fair value of the award is generally recognized over the vesting period. However, the related deduction from taxes payable is based on the award's intrinsic value at the time of exercise, which can 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 are currently recognized in additional paid-in capital ("APIC") within equity, deficiencies are first recorded to APIC to the extent previously recognized excess tax benefits exist, after which time deficiencies are recorded to income tax expense. Under the new guidance, all excess tax benefits/deficiencies would be recognized as income tax benefit/expense in the statement of income. The new ASU's income tax aspects also impact the calculation of diluted earnings per share by excluding excess tax benefits/ deficiencies from the calculation of assumed proceeds available to repurchase shares under the treasury stock method. Relative to forfeitures, the new standard provides an accounting policy election to account for forfeitures as they occur. Additionally, cash flows related to excess tax benefits will be included in Net cash provided by operating activities and will no longer be separately classified as a financing activity. Finally, the new ASU also allows a company to repurchase more of an employee's shares for tax withholding purposes. The Company will adopt the new standard on January 1, 2017, and will account for forfeitures as they occur.

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. This ASU is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The standard requires application using a retrospective transition method. This ASU is not expected to have a material impact on the Company's consolidated results of operations and financial condition.

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 plans to early adopt on January 1, 2017.

NOTE 2 — ACCOUNTS RECEIVABLE

Accounts receivable at December 31 consists of:

(In thousands)	2016	2015
Trade Accounts Receivable	$ 93,823	$ 87,282
Unbilled Recoverable Costs and Accrued Profits	16,194	8,307
Total Receivables	110,017	95,589
Less Allowance for Doubtful Accounts	(602)	(312)
	$ 109,415	$ 95,277

NOTE 3 — INVENTORIES

Inventories at December 31 are as follows:

(In thousands)	2016	2015
Finished Goods	$ 28,792	$ 27,770
Work in Progress	20,790	23,977
Raw Material	67,015	63,720
	$ 116,597	$ 115,467

At December 31, 2016, the Company's reserve for inventory valuation was $15.4 million, or 11.7% of gross inventory. At December 31, 2015, the Company's reserve for inventory valuation was $14.6 million, or 11.2% of gross inventory.

NOTE 4 — INTANGIBLE ASSETS

The following table summarizes acquired intangible assets as follows:

		December 31, 2016		December 31, 2015	
(In thousands)	Weighted Average Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	4 Years	$ 2,146	$ 1,450	$ 2,146	$ 1,264
Noncompete Agreement	3 Years	2,500	979	2,500	479
Trade Names	7 Years	10,189	3,153	10,217	2,216
Completed and Unpatented Technology	6 Years	24,118	9,221	24,056	6,795
Backlog	-	11,224	11,224	11,202	10,793
Customer Relationships	12 Years	97,046	23,093	96,472	16,770
Total Intangible Assets	6 Years	$ 147,223	$ 49,120	$ 146,593	$ 38,317

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 $10.8 million, $11.3 million and $15.8 million for 2016, 2015 and 2014, respectively.

Based upon acquired intangible assets at December 31, 2016, amortization expense for each of the next five years is estimated to be:

(In thousands)		
2017	$	10,445
2018		10,133
2019		9,754
2020		9,198
2021		9,152

NOTE 5 — GOODWILL

The following table summarizes the changes in the carrying amount of goodwill for 2016 and 2015:

(In thousands)	2016	2015
Balance at Beginning of the Year	$ 115,369	$ 100,153
Acquisition	—	16,237
Foreign Currency Translations and Other	(162)	(1,021)
Balance at End of the Year	$ 115,207	$ 115,369
Goodwill - Gross	$ 131,749	$ 131,911
Accumulated Impairment Losses	(16,542)	(16,542)
Goodwill - Net	$ 115,207	$ 115,369

As discussed in Note 1, goodwill is not amortized but is periodically tested for impairment. For the eight reporting units with goodwill on the first day of our fourth quarter, the Company performed a quantitative assessment of the goodwill's carrying value. The assessment indicated no impairment to the carrying value of goodwill in any of the Company's reporting units and no impairment charge was recognized. There was no impairment to the carrying value of goodwill in 2015 or 2014. All goodwill relates to the Aerospace segment.

NOTE 6 — LONG-TERM DEBT AND NOTES PAYABLE

Long-term debt consists of the following:

(In thousands)	2016	2015
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% (2.27% at December 31, 2016).	$ 136,000	$ 155,000
Other Bank Debt	1,270	1,963
Capital Lease Obligations	10,850	12,826
	148,120	169,789
Less Current Maturities	2,636	2,579
	$ 145,484	$ 167,210

Principal maturities of long-term debt are approximately:

(In thousands)		
2017	$	2,636
2018		2,610
2019		1,835
2020		2,096
2021		138,049
Thereafter		894
	$	148,120

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.

The Company's Third Amended and Restated Credit Agreement provided for a $75 million five-year revolving credit facility and a $190 million five-year term loan, both expiring on June 30, 2018. The facilities carried an interest rate of LIBOR plus between 2.25% and 3.50%, depending on the Company’s leverage ratio as defined in the Credit Agreement. In addition, the Company was required to pay a commitment fee of between 0.25% and 0.50% on the unused portion of the total credit commitment for the preceding quarter, based on the Company’s leverage ratio under the credit agreement.

On February 28, 2014, in connection with the funding of the acquisition of ATS, the Company amended its existing credit facility to exercise its option to increase the revolving credit commitment. The credit agreement provided for a $125 million, five-year revolving credit facility maturing on June 30, 2018, of which $58.0 million was drawn to finance the acquisition. In addition, the Company was required to pay a commitment fee quarterly at a rate of between 0.25% and 0.50% per annum on the unused portion of the total revolving credit commitment, based on the Company’s leverage ratio.

On September 26, 2014, the Company modified and extended its existing credit facility (the “Original Facility”) by entering into the Fourth Amended and Restated Credit Agreement (the “Credit Agreement”). On the closing date, there were $180.5 million of term loans outstanding and $6 million of revolving loans outstanding under the Original Facility. Pursuant to the Agreement, the Original Facility was replaced with a $350 million revolving credit line with the option to increase the line by up to $150 million. The outstanding balances in the Original Facility were rolled into the Agreement on the date of entry. In addition, the maturity date of the loans under the Agreement was extended to September 26, 2019. The credit facility allocates up to $20 million of the $350 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2016, outstanding letters of credit totaled $1.1 million.

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

Covenants in the Agreement were modified to where the maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) is 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 will pay interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.375% and 2.25% based upon the Company’s leverage ratio. The Company will also pay a commitment fee to the Lenders in an amount equal to between 0.175% and 0.35% on the undrawn portion of the credit facility, based upon the Company’s leverage ratio. The Company is required to maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement. The Company’s interest coverage ratio was 29.5 to 1 at December 31, 2016. The Company’s leverage ratio was 1.38 to 1 at December 31, 2016. The Company is in compliance with all financial and other covenants at December 31, 2016.

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)	2016	2015	2014
Balance at Beginning of the Year	$ 5,741	$ 4,884	$ 2,796
Warranty Liabilities Acquired	—	500	564
Warranties Issued	2,281	4,039	3,431
Reassessed Warranty Exposure	(966)	(485)	(34)
Warranties Settled	(2,381)	(3,197)	(1,873)
Balance at End of the Year	$ 4,675	$ 5,741	$ 4,884

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)	2016	2015	2014
Current			
U.S. Federal	$ 21,667	$ 24,809	$ 22,705
State	2,899	2,382	3,797
Foreign	551	137	1,112
Deferred			
U.S. Federal	(2,871)	703	(3,035)
State	(1,140)	(1,019)	(655)
Foreign	(745)	64	(987)
	$ 20,361	$ 27,076	$ 22,937

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

	2016	2015	2014
Statutory Federal Income Tax Rate	35.0 %	35.0 %	35.0 %
Permanent Items			
Non-deductible Stock Compensation Expense	1.1 %	0.6 %	0.6 %
Domestic Production Activity Deduction	(3.3)%	(2.9)%	(2.6)%
Other	0.2 %	0.2 %	0.1 %
Foreign Tax Benefits	(1.1)%	(1.1)%	(1.7)%
State Income Tax, Net of Federal Income Tax Effect	1.8 %	0.9 %	2.6 %
Research and Development Tax Credits	(3.7)%	(2.7)%	(4.3)%
Other	(0.4)%	(1.2)%	(0.7)%
Effective Tax Rate	29.6 %	28.8 %	29.0 %

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.

No provision has been made for U.S. federal or foreign taxes on that portion of certain foreign subsidiaries' undistributed earnings ($13.1 million at December 31, 2016) considered to be permanently reinvested. It is not practicable to determine the amount of tax that would be payable if these amounts were repatriated to the U.S.

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

(In thousands)	2016	2015
Deferred Tax Assets:		
Asset Reserves	$ 9,208	$ 8,709
Deferred Compensation	8,378	7,986
Capital Lease Basis Difference	1,690	1,753
State Investment and Research and Development Tax Credit Carryforwards, Net of Federal Tax	665	533
Customer Advanced Payments and Deferred Revenue	3,750	1,722
State Net Operating Loss Carryforwards and Other	4,282	2,401
Total Gross Deferred Tax Assets	27,973	23,104
Valuation Allowance for State Deferred Tax Assets and Tax Credit Carryforwards, Net of Federal Tax	(3,816)	(2,640)
Deferred Tax Assets	24,157	20,464
Deferred Tax Liabilities:		
Depreciation	12,972	12,561
Goodwill and Intangible Assets	18,558	20,113
Other	1,280	1,199
Deferred Tax Liabilities	32,810	33,873
Net Deferred Tax Liabilities	$ (8,653)	$ (13,409)

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

(In thousands)	2016	2015
Other Assets — Long-term	$ 2,644	$ 1,558
Deferred Tax Liabilities — Long-term	(11,297)	(14,967)
Net Deferred Tax Liabilities	$ (8,653)	$ (13,409)

At December 31, 2016, state tax credit carryforwards amounted to approximately $1.0 million, of which $0.8 million will expire from 2017 through 2030 and $0.2 million will carryforward until utilized. At December 31, 2016, state net operating loss carryforwards which the Company expects to utilize amounted to approximately $8.2 million and expire at various dates between 2032 and 2034.

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 $52.9 million and expire at various dates from 2021 through 2035. The excess tax benefits associated with stock option exercises are recorded directly to shareholders' equity only when realized and amounted to approximately $0.8 million, $3.0 million and $5.3 million for the years ended December 31, 2016, 2015, and 2014 respectively.

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

(in thousands)	2016	2015	2014
Balance at Beginning of the Year	$ —	$ 181	$ 1,940
Decreases as a Result of Tax Positions Taken in Prior Years	—	(181)	(1,901)
Increases as a Result of Tax Positions Taken in the Current Year	—	—	142
Balance at End of the Year	$ —	$ —	$ 181

There are no penalties or interest liabilities accrued as of December 31, 2016 or 2015, nor are any material penalties or interest costs included in expense for each of the years ended December 31, 2016, 2015 and 2014. 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 2013 through 2016 for federal purposes and 2012 through 2016 for state purposes.

Pretax income from the Company's foreign subsidiaries amounted to $1.6 million, $3.6 million and $4.3 million for 2016, 2015 and 2014, respectively. The balance of pretax earnings for each of those years were domestic.

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 $6.7 million, $6.3 million and $5.1 million in 2016, 2015 and 2014, 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, 2016 and 2015 amounts to $18.6 million and $16.7 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, 2016 or 2015 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 $2.5 million ($3.9 million net of $1.4 million in taxes) and unrecognized actuarial losses of $4.0 million ($6.1 million net of $2.1 million in taxes) are included in AOCI at December 31, 2016 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, 2017 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, 2016 is $0.3 million ($0.4 million net of $0.1 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)	2016	2015
Funded Status		
Projected Benefit Obligation		
Beginning of the Year — January 1	$ 20,418	$ 20,990
Service Cost	173	194
Interest Cost	901	843
Actuarial (Gain) Loss	389	(1,261)
Benefits Paid	(348)	(348)
End of the Year — December 31	$ 21,533	$ 20,418

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

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

The plans are unfunded at December 31, 2016 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 $21.2 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)	2016	2015	2014
Net Periodic Cost			
Service Cost — Benefits Earned During Period	$ 173	$ 194	$ 247
Interest Cost	901	843	721
Amortization of Prior Service Cost	413	495	495
Amortization of Losses	343	449	108
Net Periodic Cost	$ 1,830	$ 1,981	$ 1,571

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

	2016	2015	2014
Discount Rate	4.45%	4.05%	5.10%
Future Average Compensation Increases	3.00% – 5.00%	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 $2.3 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)	2016	2015
Funded Status		
Accumulated Postretirement Benefit Obligation		
Beginning of the Year — January 1	$ 925	$ 990
Service Cost	5	6
Interest Cost	40	39
Actuarial (Gain) Loss	112	(54)
Benefits Paid	(61)	(56)
End of the Year — December 31	$ 1,021	$ 925

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

	2016	2015
Discount Rate	4.20%	4.45%

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

(In thousands)	2016	2015	2014
Net Periodic Cost			
Service Cost — Benefits Earned During Period	$ 5	$ 6	$ 3
Interest Cost	40	39	31
Amortization of Prior Service Cost	24	26	25
Amortization of Losses	22	26	—
Net Periodic Cost	$ 91	$ 97	$ 59

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

	2016	2015	2014
Discount Rate	4.45%	4.05%	5.10%
Future Average Healthcare Benefit Increases	5.72%	5.32%	5.48%

Unrecognized prior service costs of $0.1 million and unrecognized actuarial losses of $0.3 million for medical, dental and long-term care insurance benefits (net of taxes of $0.2 million) are included in AOCI at December 31, 2016 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, 2016 that will be recognized as components of net periodic benefit cost during the year ended December 31, 2017 for the Plan will be insignificant. For measurement purposes, a 5.3% and 6.2% increase in the cost of health care benefits was assumed for 2017 and 2018, respectively, and a range between 4.6% and 6.3% 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 $0.9 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 91.7% funded as of January 1, 2016. The Company's contributions to the plan were $1.1 million in 2016, $1.0 million in 2015 and $0.9 million in 2014. 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 Buyback Program may be suspended or discontinued at any time. Under this program the Company has repurchased approximately 523,000 shares for $17.6 million.

Reserved Common Stock

At December 31, 2016, approximately 11.4 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 currency translation adjustments, mark to market adjustments for derivatives and retirement liability adjustments. Income taxes related to derivatives and retirement liability adjustments within other comprehensive income are generally recorded based on an effective tax rate of approximately 35%. No income tax effect is recorded for currency translation adjustments.

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

(In thousands)	2016	2015
Foreign Currency Translation Adjustments	$ (8,597)	$ (7,971)
Retirement Liability Adjustment – Before Tax	(10,611)	(10,912)
Tax Benefit	3,714	3,819
Retirement Liability Adjustment – After Tax	(6,897)	(7,093)
Accumulated Other Comprehensive Loss	$ (15,494)	$ (15,064)

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

(In thousands)	2016	2015	2014
Foreign Currency Translation Adjustments	$ (626)	$ (4,617)	$ (4,638)
Reclassification to Interest Expense	—	—	103
Mark to Market Adjustments for Derivatives	—	—	4
Tax Expense	—	—	(38)
Mark to Market Adjustments for Derivatives	—	—	69
Retirement Liability Adjustment	301	2,311	(5,800)
Tax Benefit (Expense)	(105)	(809)	2,031
Retirement Liability Adjustment	196	1,502	(3,769)
Other Comprehensive (Loss) Income	$ (430)	$ (3,115)	$ (8,338)

NOTE 12 — EARNINGS PER SHARE

Earnings per share computations are based upon the following table:

(In thousands, except per share data)	2016	2015	2014
Net Income	$ 48,424	$ 66,974	$ 56,170
Basic Earnings Weighted Average Shares	29,163	29,245	28,716
Net Effect of Dilutive Stock Options	869	934	1,254
Diluted Earnings Weighted Average Shares	30,032	30,179	29,970
Basic Earnings Per Share	$ 1.66	$ 2.29	$ 1.96
Diluted Earnings Per Share	$ 1.61	$ 2.22	$ 1.87

The above information has been adjusted to reflect the impact of the three-for-twenty distribution of Class B Stock for shareholders of record on October 11, 2016.

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 covered by out-of-the-money stock options was approximately 0.2 million at December 31, 2016, 0.1 million at December 31, 2015 and were insignificant at December 31, 2014.

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.

	2016	2015	2014
Weighted Average Fair Value of the Options Granted	$ 16.85	$ 18.00	$ 19.35

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:

	2016	2015	2014
Risk-free Interest Rate	1.08% – 2.34%	1.36% – 2.10%	0.12% – 2.30%
Dividend Yield	—%	—%	—%
Volatility Factor	0.40 – 0.45	0.40 – 0.51	0.42 – 0.52
Expected Life in Years	4.0 – 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, 2016, 2015 and 2014:

(In thousands)	2016	2015	2014
Stock Compensation Expense	$ 2,281	$ 2,274	$ 1,730
Tax Benefit	(145)	(177)	(122)
Stock Compensation Expense, Net of Tax	$ 2,136	$ 2,097	$ 1,608

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)	2016			2015			2014		
	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	1,444,954	$ 12.61	$ 30,675	1,686,178	$ 9.43	$ 43,778	2,237,325	$ 6.58	$ 78,846
Options Granted	104,900	$ 34.29	$ (48)	105,742	$ 35.80	$ (42)	97,641	$ 36.63	$ 506
Options Exercised	(188,768)	$ 7.20	$ (5,029)	(346,966)	$ 4.25	$ (10,808)	(644,058)	$ 3.63	$ (24,599)
Options Forfeited	(22,813)	$ 25.96	$ (180)	—	$ —	$ —	(4,730)	$ 11.44	$ (144)
Outstanding at December 31	1,338,273	$ 14.85	$ 25,418	1,444,954	$ 12.61	$ 32,928	1,686,178	$ 9.43	$ 54,609
Exercisable at December 31	1,091,561	$ 11.03	$ 24,898	1,167,040	$ 9.20	$ 30,576	1,371,614	$ 6.58	$ 48,331

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 $33.84, $35.40 and $41.83 as of December 31, 2016, 2015 and 2014, respectively.

The weighted average fair value of options vested during 2016, 2015 and 2014 was $12.05, $10.85 and $6.13, respectively. The total fair value of options that vested during the year amounted to $1.4 million, $1.5 million and $1.2 million for the years ended December 31, 2016, 2015 and 2014, respectively. At December 31, 2016, total compensation costs related to non-vested awards not yet recognized amounts to $5.2 million and will be recognized over a weighted average period of 2.4 years.

The following is a summary of weighted average exercise prices and contractual lives for outstanding and exercisable stock options as of December 31, 2016:

	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
$ 3.04 - $ 4.45	471,841	2.5	$ 3.29	471,841	2.5	$ 3.29
$ 5.77 - $ 6.35	45,166	0.5	6.01	45,166	0.5	6.01
$ 8.83 - $15.68	459,138	4.6	11.73	431,370	4.5	11.81
$ 26.09 - $41.19	342,288	8.5	33.93	123,344	7.9	33.05
$ 52.77 - $52.77	19,840	8.2	52.77	19,840	8.2	52.77
	1,338,273	4.8	14.85	1,091,561	3.9	11.03

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, 2016, the Company had options outstanding for 1,117,799 shares under the plans. At December 31, 2016, there were 616,752 options available for future grant under the plan established in 2011.

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, 2016, the Company had options outstanding for 220,474 shares under the plans. At December 31, 2016, there were 172,288 options available for future grant under the plan established in 2005.

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, 2016, employees had subscribed to purchase 108,995 shares at $33.09 per share. The weighted average fair value of the options was approximately $9.88, $6.93 and $8.40 for options granted during the year ended December 31, 2016, 2015 and 2014, 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:

	2016	2015	2014
Risk-free Interest Rate	0.63%	0.31%	0.10%
Dividend Yield	—%	—%	—%
Volatility Factor	0.45	0.40	0.42
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 and 2015, recorded within Other Liabilities. The values were determined using Level 3 inputs. There were no financial assets carried at fair value measured on a recurring basis at December 31, 2016 or 2015. 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 have 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. There was a similar adjustment of $5.0 million in fiscal 2014. These adjustments were 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. There were no impairment charges to goodwill in any of the Company's reporting units in 2016, 2015 or 2014.

Intangible assets that are amortized 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 intangible assets in either of the Company's segments in 2016, 2015 or 2014.

The Armstrong intangible assets acquired on January 14, 2015 were valued using a discounted cash flow methodology 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 2016 and 2015:

	Quarter Ended							
(Unaudited)	Dec. 31,	October 1,	July 2,	April 2,	Dec. 31,	October 3,	July 4,	April 4,
(In thousands, except for per share data)	2016	2016	2016	2016	2015	2015	2015	2015
Sales	$154,068	$ 155,099	$164,426	$ 159,530	$157,340	$ 200,145	$173,156	$ 161,638
Gross Profit (sales less cost of products sold)	$ 36,486	$ 38,663	$ 44,835	$ 39,483	$ 38,901	$ 59,427	$ 49,452	$ 40,162
Income Before Income Taxes	$ 14,296	$ 16,422	$ 21,555	$ 16,512	$ 14,822	$ 35,887	$ 27,044	$ 16,297
Net Income	$ 9,885	$ 12,074	$ 14,980	$ 11,485	$ 13,907	$ 24,694	$ 17,690	$ 10,683
Basic Earnings Per Share	$ 0.34	$ 0.42	$ 0.51	$ 0.39	$ 0.47	$ 0.84	$ 0.61	$ 0.37
Diluted Earnings Per Share	$ 0.33	$ 0.41	$ 0.50	$ 0.38	$ 0.46	$ 0.82	$ 0.59	$ 0.35

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, 2016, 2015 and 2014 was $3.9 million, $2.9 million and $3.0 million, respectively. The following table represents future minimum lease payment commitments as of December 31, 2016:

(In thousands)	
2017	$ 2,380
2018	1,872
2019	1,496
2020	137
2021	—
	$ 5,885

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, 2016 were $98.5 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, 2016 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, 2016.

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 has filed an appeal with the United States Court of Appeals for the Federal Circuit. The Company believes that it has valid defenses to Lufthansa's claims and will vigorously contest the appeal. 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, 2016.

NOTE 17 — SEGMENTS

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

(In thousands)	2016	2015	2014
Sales:			
Aerospace	$ 534,408	$ 549,738	$ 494,747
Less Inter-segment Sales	(367)	—	—
Total Aerospace Sales	534,041	549,738	494,747
Test Systems	99,082	142,596	166,769
Less Inter-segment Sales	—	(55)	(477)
Test Systems	99,082	142,541	166,292
Total Consolidated Sales	$ 633,123	$ 692,279	$ 661,039
Operating Profit (Loss) and Margins:			
Aerospace	$ 77,966	$ 85,103	$ 79,753
	14.6%	15.5%	16.1%
Test Systems	8,507	25,529	12,401
	8.6%	17.9%	7.4%
Total Operating Profit	86,473	110,632	92,154
	13.7%	16.0%	13.9%
Deductions from Operating Profit:			
Interest Expense, Net of Interest Income	(4,354)	(4,751)	(8,255)
Corporate and Other Expenses, Net	(13,334)	(11,831)	(4,792)
Income before Income Taxes	$ 68,785	$ 94,050	$ 79,107
Depreciation and Amortization:			
Aerospace	$ 19,873	$ 19,377	$ 17,847
Test Systems	5,273	5,209	8,786
Corporate	644	723	621
Total Depreciation and Amortization	$ 25,790	$ 25,309	$ 27,254
Identifiable Assets:			
Aerospace	$ 500,892	$ 510,884	$ 468,481
Test Systems	76,575	64,934	69,247
Corporate	26,877	33,425	25,182
Total Assets	$ 604,344	$ 609,243	$ 562,910
Capital Expenditures:			
Aerospace	$ 9,511	$ 16,503	$ 35,650
Test Systems	3,345	2,103	3,472
Corporate	181	35	1,760
Total Capital Expenditures	$ 13,037	$ 18,641	$ 40,882

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, 2016, 2015 and 2014, 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 $115.2 million and $115.4 million at December 31, 2016 and 2015, respectively. In the Test Systems segment, there was no goodwill as of December 31, 2016 and 2015.

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

(In thousands)	2016	2015	2014
United States	$ 504,270	$ 508,724	$ 444,277
North America (excluding United States)	12,331	13,044	8,717
Asia	52,171	108,967	141,247
Europe	61,200	57,936	64,742
South America	577	1,112	1,192
Other	2,574	2,496	864
	$ 633,123	$ 692,279	$ 661,039

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

(In thousands)	2016	2015	2014
United States	$ 114,048	$ 115,117	$ 105,698
France	8,216	9,092	10,347
Canada	548	533	271
	$ 122,812	$ 124,742	$ 116,316

Sales recorded by the Company’s foreign operations were $50.1 million, $50.8 million and $64.5 million in 2016, 2015 and 2014, respectively. Net income from these locations was $1.8 million, $3.4 million and $4.1 million in 2016, 2015 and 2014, respectively. Net assets held outside of the U.S. total $36.8 million and $36.1 million at December 31, 2016 and 2015, respectively. The exchange gain included in determining net income was insignificant in 2016 and 2014 and was $1.0 million in 2015. Cumulative translation adjustments amounted to $(8.6) million and $(8.0) million at December 31, 2016 and 2015, 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:

	2016	2015	2014
Percent of Consolidated Revenue			
Panasonic	21.6%	21.0%	17.7%
Boeing	15.2%	13.0%	14.1%

(In thousands)	2016	2015
Accounts Receivable at December 31,		
Panasonic	$ 17,126	$ 14,433
Boeing	$ 11,737	$ 9,598

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

NOTE 18 — ACQUISITIONS

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.

Astronics Test Systems

On February 28, 2014, our wholly owned subsidiary, ATS, purchased substantially all of the assets and liabilities of the Test and Services Division of EADS North America, Inc. for approximately $69.4 million in cash. Located in Irvine, California, ATS is a leading provider of highly-engineered automatic test systems, subsystems and instruments for the semiconductor, consumer electronics, commercial aerospace & defense industries. ATS provides fully customized testing systems and support services for these markets. It also designs and manufactures test equipment under the test instrument brands known as Racal and Talon. The acquisition strengthens our service offerings and expertise in the test market. This subsidiary is included in our Test Systems segment. The purchase price allocation for this acquisition has been finalized.

Acquisition costs are expensed as incurred. Acquisition related expenses were insignificant in 2016 and were approximately $0.4 million and $0.3 million in 2015 and 2014, respectively.

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.

Changes in Internal Control over Financial Reporting

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 2016 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 54	President, Chief Executive Officer and Director of the Company	2001
David C. Burney Age 54	Executive Vice President, Secretary and Chief Financial Officer of the Company	2003
Mark A. Peabody Age 57	Astronics Advanced Electronic Systems President and Executive Vice President of Astronics Corporation	2010
James S. Kramer Age 53	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, 2016, 2015 and 2014
   (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015 and 2014
   (iii) Consolidated Balance Sheets as of December 31, 2016 and 2015
   (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014
   (v) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2016, 2015 and 2014
   (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 May 28, 2013 (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 and Guarantee Agreement relating to PGA Electronic, incorporated by reference to the registrant’s Form 8-K, Exhibit 10.1 and Exhibit 10.2, filed November 5, 2013 (File No. 000-07087).
10.19	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).
10.20	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).
10.21	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).
10.22	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).
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	Balance at End of Period
(In thousands)					
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
2014	Allowance for Doubtful Accounts	$ 140	$ 119	$ 34	$ 293
	Reserve for Inventory Valuation	11,041	1,840	(605)	12,276
	Deferred Tax Valuation Allowance	2,509	625	—	3,134

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 23, 2017.

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 23, 2017
/s/ David C. Burney David C. Burney	Executive Vice President, Chief Financial Officer (Principal Financial Officer)	February 23, 2017
/s/ Nancy L. Hedges Nancy L. Hedges	Corporate Controller and Principal Accounting Officer	February 23, 2017
/s/ Raymond W. Boushie Raymond W. Boushie	Director	February 23, 2017
/s/ Robert T. Brady Robert T. Brady	Director	February 23, 2017
/s/ John B. Drenning John B. Drenning	Director	February 23, 2017
/s/ Peter J. Gundermann Peter J. Gundermann	Director	February 23, 2017
/s/ Kevin T. Keane Kevin T. Keane	Director	February 23, 2017
/s/ Robert J. McKenna Robert J. McKenna	Director	February 23, 2017
/s/ Jeffry D. Frisby Jeffry D. Frisby	Director	February 23, 2017
/s/ Warren C. Johnson Warren C. Johnson	Director	February 23, 2017
/s/ Neil Kim Neil Kim	Director	February 23, 2017

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

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-3 No. 333-176160) and related prospectus of Astronics Corporation for the registration of common stock, preferred stock, warrants, rights, stock purchase contracts, units and debt securities;

of our reports dated February 23, 2017 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, 2016.

/s/ Ernst & Young LLP

Buffalo, New York
February 23, 2017

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 23, 2017

/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 23, 2017

/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, 2016 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 23, 2017	/s/ Peter J. Gundermann
	Peter J. Gundermann
	Title: Chief Executive Officer
Dated: February 23, 2017	/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.

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SHAREHOLDER INFORMATION

Corporate Headquarters

Astronics Corporation
130 Commerce Way
East Aurora, New York 14052
716.805.1599
www.astronics.com

2017 Annual Meeting

Astronics Corporation's Annual Meeting of Shareholders will be held at 10:00 am PT on Wednesday, May 31, 2017 at Astronics Advanced Electronic Systems (AES)
12950 Willows Road NE
Kirkland, WA 98034

Investor Relations

Investors, stockbrokers, security analysts and others seeking information about Astronics Corporation should contact:

David C. Burney
Chief Financial Officer
716.805.1599
invest@astronics.com

Deborah K. Pawlowski
Kei Advisors LLC
716.843.3908
dpawlowski@keiadvisors.com

Transfer Agent

For services, such as reporting a change of address, replacement of lost stock certificates, conversion of Class B shares, changes in registered ownership, or for inquiries about your account, contact:

Wells Fargo Shareowner Services
1110 Centre Pointe Curve, Suite 101
Mendota Heights, MN 55120
Tel: 800.468.9716
651.450.4064
www.shareowneronline.com

Attorneys

Hodgson Russ LLP
Buffalo, New York

Independent Auditors

Ernst & Young LLP
Buffalo, New York

DIRECTORS AND OFFICERS

EXECUTIVE OFFICERS

Peter J. Gundermann
President and Chief Executive Officer

David C. Burney
Executive Vice President, Secretary and Chief Financial Officer

James S. Kramer
Executive Vice President

Mark A. Peabody
Executive Vice President

BOARD OF DIRECTORS

Kevin T. Keane
Chairman of the Board
Astronics Corporation

Raymond W. Boushie [1, 2*, 3]
President and Chief Executive Officer, retired
Crane Aerospace and Electronics

Robert T. Brady [1*, 2, 3]
Chief Executive Officer and
Executive Chairman of the Board, retired
Moog Inc.

John B. Drenning [3]
Partner
Hodgson Russ LLP

Jeff Frisby [1, 2, 3]
Former President and Chief Executive Officer
Triumph Group, Inc.

Peter J. Gundermann
President and Chief Executive Officer
Astronics Corporation

Warren C. Johnson [1, 2, 3]
President, retired
Aircraft Group for Moog, Inc.

Neil Kim [1, 2, 3]
Executive Vice President, Operations and Central Engineering, retired
Broadcom Corporation

Robert J. McKenna [1, 2, 3*]
President and Chief Executive Officer, retired
Wenger Corporation

[1] Audit Committee
[2] Compensation Committee
[3] Nominating/Governance Committee
** Committee Chairman*

ASTRONICS
CORPORATION

NASDAQ: ATRO

130 Commerce Way ● East Aurora, New York 14052 ● 716.805.1599
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