

KADANT INC  
Form 10-K  
March 15, 2017

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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FORM 10-K

(mark one)

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

For the fiscal year ended December 31, 2016

OR

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

Commission file number 1-11406

KADANT INC.

(Exact name of Registrant as specified in its charter)

Delaware

52-1762325

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

One Technology Park Drive

Westford, Massachusetts

01886

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (978) 776-2000

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

Title of each class	Name of each exchange on which registered
Common Stock, \$.01 par value	New York Stock Exchange

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

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

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. 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 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 the definitions of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

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

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

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The aggregate market value of the voting and non-voting common equity held by nonaffiliates of the Registrant as of July 2, 2016, was approximately \$560,179,000.

As of February 17, 2017, the Registrant had 10,937,627 shares of common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's definitive Proxy Statement pursuant to Regulation 14A promulgated under the Securities Exchange Act of 1934, as amended, to be used in connection with the Registrant's 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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 for the Fiscal Year Ended December 31, 2016  
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PART I

Forward-Looking Statements

This Annual Report on Form 10-K and the documents that we incorporate by reference in this Report include forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. These forward-looking statements are not statements of historical fact, and may include statements regarding possible or assumed future results of operations.

Forward-looking statements are subject to risks and uncertainties and are based on the beliefs and assumptions of our management, using information currently available to our management. When we use words such as "believes," "expects," "anticipates," "intends," "plans," "estimates," "seeks," "should," "likely," "will," "would," "may," "continue," "could," or similar expressions, we are making forward-looking statements.

Forward-looking statements are not guarantees of performance. They involve risks, uncertainties, and assumptions. Our future results of operations may differ materially from those expressed in the forward-looking statements. Many of the important factors that will determine these results and values are beyond our ability to control or predict. You should not put undue reliance on any forward-looking statements. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise. For a discussion of important factors that may cause our actual results to differ materially from those suggested by the forward-looking statements, you should read carefully the section captioned "Risk Factors" in Part I, Item 1A, of this Report.

Item 1. Business

The terms "we," "us," "our," "Registrant," or "Company" in this Report refer to Kadant Inc. and its consolidated subsidiaries.

Description of Our Business

We are a leading global supplier of equipment and critical components used in process industries worldwide. In addition, we manufacture granules made from papermaking by-products. We have a diverse and large customer base, including most of the world's major paper and oriented strand board (OSB) manufacturers, and our products, technologies and services play an integral role in enhancing process efficiency, optimizing energy utilization, and maximizing productivity in resource-intensive industries. We believe our large installed base provides us with a spare parts and consumables business that yields higher margins than our capital equipment business. In 2016\*, approximately 62% of our revenue was from the sale of parts and consumables products.

Our continuing operations are comprised of two reportable operating segments, Papermaking Systems and Wood Processing Systems, and a separate product line, Fiber-based Products. Through our Papermaking Systems segment, we develop, manufacture, and market a range of equipment and products for the global papermaking, paper recycling, recycling and waste management, and other process industries. Through our Wood Processing Systems segment, we develop, manufacture, and market stranders and related equipment used in the production of OSB, and sell debarking and wood chipping equipment used in the forest products and the pulp and paper industries. Through this segment, we also provide refurbishment and repair of pulping equipment for the pulp and paper industry. Through our Fiber-based Products business, we manufacture and sell granules derived from pulp fiber for use as carriers for agricultural, home lawn and garden, and professional lawn, turf and ornamental applications, as well as for oil and grease absorption. On April 4, 2016, we acquired all the outstanding shares of RT Holding GmbH, the parent corporation of a group of companies known as the PAALGROUP (PAAL), for approximately 49.7 million euros, net of cash acquired, or approximately \$56.6 million. PAAL manufactures balers and related equipment used in the processing of recyclable and waste materials. This acquisition, which is included in our Papermaking Systems segment's Stock-Preparation product line, broadened our product portfolio and extended our presence deeper into recycling and waste management. PAAL, headquartered in Germany, also has operations in the United Kingdom, France, and Spain.

Papermaking Systems Segment

Our Papermaking Systems segment has a long and well-established history of developing, manufacturing, and marketing equipment for the global papermaking and paper recycling industries. Some of our businesses or their predecessor companies have been in operation for more than 100 years. Our customer base includes major global paper manufacturers and we believe we have one of the largest installed bases of equipment in the markets we serve within the pulp and paper industry. We manufacture our products in ten countries in Europe, North and South America, and Asia.

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\* Unless otherwise noted, references to 2016, 2015, and 2014 in this Annual Report on Form 10-K are for the fiscal years ended December 31, 2016, January 2, 2016, and January 3, 2015, respectively.

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Our Papermaking Systems segment consists of the following product lines: Stock-Preparation; Doctoring, Cleaning, & Filtration; and Fluid-Handling.

### Stock-Preparation

We develop, manufacture, and market complete custom-engineered systems and equipment, as well as standard individual components, for baling, pulping, de-inking, screening, cleaning, and refining primarily recycled fiber for preparation for entry into the paper machine, and recausticizing and evaporation equipment and systems used in the production of virgin pulp. Our baling equipment is also used to compress a variety of other secondary materials to prepare them for transport or storage. Our principal stock-preparation products include:

Recycling and approach flow systems: Our equipment includes pulping, screening, cleaning, and de-inking systems that blend pulp mixtures and remove contaminants, such as ink, glue, metals, and other impurities, to prepare them for entry into the paper machine during the production of recycled paper.

Virgin pulping process equipment: Our equipment includes pulp washing, evaporator, recausticizing, and condensate treatment systems used to remove lignin, concentrate and recycle process chemicals, and remove condensate gases.

Balers and related equipment: Our equipment includes horizontal channel balers, vertical balers, conveyors, compactors, and bale wrapping machines used in the processing of recyclable and waste materials.

### Doctoring, Cleaning, & Filtration

We develop, manufacture, and market a wide range of doctoring, cleaning, and filtration systems and related consumables that continuously clean rolls to keep paper machines running efficiently; doctor blades made of a variety of materials to perform functions including cleaning, creping, web removal, flaking, and the application of coatings; profiling systems that control moisture, web curl, and gloss during paper converting; and systems and equipment used to continuously clean paper machine fabrics and rolls, drain water from pulp mixtures, form the sheet or web, and filter the process water for reuse. Our principal doctoring, cleaning, and filtration products include:

Doctor systems and holders: Our doctor systems clean papermaking rolls to maintain the efficient operation of paper machines and other equipment by placing a blade against the roll at a constant and uniform pressure. A doctor system consists of the structure supporting the blade and the blade holder.

Profiling systems: We offer profiling systems that control moisture, web curl, and gloss during paper converting.

Doctor blades: We manufacture doctor and scraper blades made of a variety of materials including metal, bi-metal, or synthetic materials that perform a variety of functions including cleaning, creping, web removal, flaking, and applying coatings. A typical doctor blade has a life ranging from eight hours to two months, depending on the application.

Shower and fabric-conditioning systems: Our shower and fabric-conditioning systems assist in the removal of contaminants that collect on paper machine fabrics used to convey the paper web through the forming, pressing, and drying sections of the paper machine. A typical paper machine has between three and 12 fabrics. These fabrics can easily become contaminated with fiber, fillers, pitch, and dirt that can have a detrimental effect on paper machine performance and paper quality. Our shower and fabric-conditioning systems assist in the removal of these contaminants.

Formation systems: We supply structures that drain, purify, and recycle process water from the pulp mixture during paper sheet and web formation.

Water-filtration systems: We offer a variety of filtration systems and strainers that remove contaminants from process water before reuse and recover reusable fiber for recycling back into the pulp mixture.

### Fluid-Handling

We develop, manufacture and market rotary joints, precision unions, steam and condensate systems, components, and controls used primarily in the dryer section of the papermaking process and during the production of corrugated

packaging, metals, plastics, rubber, textiles, chemicals, and food. Our principal fluid-handling systems include:

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- Rotary joints: Our mechanical devices, used with rotating shafts, allow the transfer of pressurized fluid from a stationary source into and out of rotating machinery for heating, cooling, or the transfer of fluid power.
- Syphons: Our devices, installed inside rotating cylinders, are used to remove fluids from the rotating cylinders through rotary joints or unions located on either end of the cylinder.
- Turbulator® bars: Our steel or stainless steel axial bars, installed on the inside of cylinders, are used to induce turbulence in the condensate layer to improve the uniformity and rate of heat transfer through the cylinders.
- Engineered steam and condensate systems: Our steam systems control the flow of steam from the boiler to the paper drying cylinders, collect condensed steam, and return it to the boiler to improve energy efficiency during the paper drying process. Our systems and equipment are also used to efficiently and effectively distribute steam in a wide variety of industrial processing applications.

### Wood Processing Systems Segment

We develop, manufacture, and market stranders and related equipment used in the production of OSB. We also supply debarking and wood chipping equipment used in the forest products and the pulp and paper industries. Our principal wood-processing products and services include:

- Stranders: Our disc and ring stranders cut batch-fed logs into strands for OSB production and are used to manage strands in real time using our patented conveying and feeding equipment.
- Rotary Debarkers: Our rotary debarkers employ a combination of mechanical abrasion and log-to-log contact to efficiently remove bark from logs of all shapes and species.
- Chippers: Our disc, drum, and veneer chippers are high-quality, robust chipper systems for waste-wood and whole-log applications found in pulp woodrooms, chip plants, sawmill, and planer mill sites.
- Repair: Refurbishment and repair of pulping equipment used in the pulp and paper industry.

### Fiber-based Products

We produce and sell biodegradable, absorbent granules derived from papermaking by-products for use primarily as carriers for agricultural, home lawn and garden, and professional lawn, turf and ornamental applications, as well as for oil and grease absorption.

### Fiscal Year

Typically, our fiscal quarters and fiscal year consist of 13 and 52 weeks, respectively, ending on the Saturday closest to the end of the corresponding calendar quarter for our fiscal quarters and on the Saturday closest to December 31 for our fourth fiscal quarter and fiscal year. As a result of the difference between the fiscal and calendar periods, a 53rd week is added to our fiscal year every five or six years. In a 53-week fiscal year, our fourth fiscal quarter contains 14 weeks. Our fiscal years ended December 31, 2016 (fiscal 2016) and January 2, 2016 (fiscal 2015) both contained 52 weeks, and our fiscal year ended January 3, 2015 (fiscal 2014) contained 53 weeks. Each quarter of fiscal 2016, 2015, and 2014 contained 13 weeks, except the fourth quarter of 2014, which contained 14 weeks.

### Research and Development

We develop a broad range of products for all facets of the markets we serve. We operate research and development facilities in the United States, Europe, and Canada, and focus our product innovations on process industry challenges and the need for improved fiber processing, heat transfer, roll and fabric cleaning, fluid handling, engineered wood processing, and secondary material handling. In addition to internal product development activities, our research centers allow customers to simulate their own operating conditions and applications to identify and quantify opportunities for improvement.

Our research and development expenses were \$7.4 million, \$6.7 million, and \$6.2 million in 2016, 2015, and 2014, respectively.



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Raw Materials

The primary raw materials used in our Papermaking Systems segment are steel, stainless steel, ductile iron, brass, bronze, and aluminum which have generally been available through a number of suppliers. To date, we have not needed to maintain raw material inventories in excess of our current needs to ensure availability.

The primary raw materials used in our Wood Processing Systems segment are steel and stainless steel, which have generally been available through a number of suppliers.

The raw material used in the manufacture of our fiber-based granules is a by-product from the production of paper that we obtain from two paper mills. If the mills were unable or unwilling to supply us with sufficient fiber, we would be forced to find one or more alternative suppliers for this raw material.

Patents, Licenses, and Trademarks

We protect our intellectual property rights by applying for and obtaining patents when appropriate. We also rely on technical know-how, trade secrets, and trademarks to maintain our competitive position. We also enter into license agreements with others to grant and/or receive rights to patents and know-how. No particular patent, or related group of patents, is so important that its expiration or loss would significantly affect our operations.

Papermaking Systems Segment

We have numerous U.S. and foreign patents, including foreign counterparts to our U.S. patents, expiring on various dates ranging from 2017 to 2034. From time to time, we enter into licenses of products with other companies that serve the pulp, papermaking, converting, and paper recycling industries.

Wood Processing Systems Segment

We currently hold several U.S. and Canadian patents, expiring on various dates ranging from 2018 to 2032, related to wood processing and debarking equipment.

Fiber-based Products

We currently hold several U.S. patents, expiring on various dates ranging from 2018 to 2034, related to various aspects of the processing of fiber-based granules and the use of these materials in the agricultural, professional turf, home lawn and garden, general absorption, oil and grease absorption, and catbox filler markets.

Seasonal Influences

Papermaking Systems Segment

There are no material seasonal influences on this segment's sales of products and services.

Wood Processing Systems Segment

Our Wood Processing Systems segment is subject to seasonal variations, with demand for many of our products tending to be greater during the building season, which generally occurs in the second and third quarters in North America.

Fiber-based Products

Our Fiber-based Products business experiences fluctuations in sales, usually in the third and fourth quarters, when sales decline due to the seasonality of the agricultural and home lawn and garden markets.

Working Capital Requirements

There are no special inventory requirements or credit terms extended to customers that would have a material adverse effect on our working capital.

Dependency on a Single Customer

No single customer accounted for more than 10% of our consolidated revenues in any of the past three years. In addition, revenues in our Papermaking Systems segment were not dependent on any one customer. The two largest customers in our Wood Processing Systems segment accounted for 48%, 32%, and 32% of its revenues in 2016, 2015, and 2014, respectively. During 2016, 2015, and 2014, approximately 60%, 50%, and 57%, respectively, of our sales were to customers outside the United States, principally in Europe and Asia.

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### Backlog

Our backlog of firm orders for the Papermaking Systems segment was \$89.6 million and \$94.9 million at year-end 2016 and 2015, respectively. The total consolidated backlog of firm orders was \$98.6 million and \$102.6 million at year-end 2016 and 2015, respectively. We anticipate that approximately 95% of the backlog at year-end 2016 will be shipped or completed during 2017. Some of these orders can be canceled by the customer upon payment of a cancellation fee.

### Competition

We are a leading supplier of systems and equipment in each of our product lines within our Papermaking Systems segment and there are several global and numerous local competitors in each market. In our Wood Processing Systems segment, we compete with one primary global competitor in the OSB market for stranding equipment and several global and local competitors for our other products. Because of the diversity of our products, we face many different types of competitors and competition. We compete primarily on the basis of technical expertise, product innovation, and product performance. We believe the reputation that we have established for high-performance, high-reliability products supported by our in-depth process knowledge and application expertise provides us with a competitive advantage. In addition, a significant portion of our business is generated from our worldwide customer base. To maintain this base, we have emphasized our global presence, local support, and a problem-solving relationship with our customers. Our success primarily depends on the following factors:

- Technical expertise and process knowledge;
- Product innovation;
- Product quality, reliability, and performance;
- Operating efficiency of our products;
- Customer service and support;
- Relative price of our products; and
- Total cost of ownership of our products.

### Environmental Protection Regulations

We believe that our compliance with federal, state, and local environmental protection regulations will not have a material adverse effect on our capital expenditures, earnings, or competitive position.

### Employees

As of year-end 2016, we had approximately 2,000 employees worldwide.

### Financial Information About Geographic Areas

Financial information concerning our segments, product lines, and geographic areas is summarized in Note 11 to the consolidated financial statements, which begin on page F-1 of this Report.

### Available Information

We file annual, quarterly, and current reports, proxy statements, and other documents with the Securities and Exchange Commission (SEC) under the Exchange Act. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC. The public can obtain any documents that we file with the SEC at [www.sec.gov](http://www.sec.gov). The public also may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, we make available free of charge through our website at [www.kadant.com](http://www.kadant.com) our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and, if applicable,

amendments to these Reports filed with or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file these materials with, or furnish them to, the SEC. We are not including the information contained on our website as part of this Report nor are we incorporating the information on our website into this Report by reference.

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## Executive Officers of the Registrant

The following table summarizes certain information concerning our executive officers as of March 1, 2017:

Name	Age	Present Title (Fiscal Year First Became Executive Officer)
Jonathan W. Painter	58	President and Chief Executive Officer (1997)
Eric T. Langevin	54	Executive Vice President and Chief Operating Officer (2006)
Jeffrey L. Powell	58	Executive Vice President (2009)
Michael J. McKenney	55	Senior Vice President and Chief Financial Officer (2002)
Sandra L. Lambert	61	Vice President, General Counsel, and Secretary (2001)
Deborah S. Selwood	48	Vice President and Chief Accounting Officer (2015)

Mr. Painter has been our chief executive officer and a director since January 2010 and our president since September 1, 2009. Between 1997 and September 2009, Mr. Painter served as an executive vice president and from March 2007 through September 2009 had supervisory responsibility for our Stock-Preparation and Fiber-based Products businesses. He served as president of our Composite Building Products business from 2001 until its sale in 2005. He also served as our treasurer and the treasurer of Thermo Electron Corporation (Thermo Electron) from 1994 until 1997. Prior to 1994, Mr. Painter held various managerial positions with us and Thermo Electron.

Mr. Langevin has been an executive vice president and our chief operating officer since January 2010. Prior to January 2010, Mr. Langevin had been a senior vice president since March 2007 and had supervisory responsibility for our Fluid-Handling and Doctoring, Cleaning, & Filtration businesses. He served as vice president, with responsibility for our Doctoring, Cleaning, & Filtration business, from 2006 to 2007. From 2001 to 2006, Mr. Langevin was president of Kadant Web Systems Inc. (now our Kadant Solutions division) and before that served as its senior vice president and vice president of operations. Prior to 2001, Mr. Langevin managed several product groups and departments within Kadant Web Systems after joining us in 1986 as a product development engineer.

Mr. Powell has been an executive vice president since March 2013 and has supervisory responsibility for our Stock-Preparation, Wood Processing, and Fiber-based Products businesses. From September 2009 to March 2013, he was a senior vice president. From January 2008 to September 2009, Mr. Powell was vice president, new ventures, with principal responsibility for acquisition-related activities. Prior to joining us, Mr. Powell was the chairman and chief executive officer of Castion Corporation from April 2003 through December 2007.

Mr. McKenney has been a senior vice president and our chief financial officer since June 2015. He served as our vice president, finance and chief accounting officer from 2002 to 2015 and as corporate controller from 1997 to 2007. Mr. McKenney was controller of Kadant AES, our division acquired from Albany International Inc., from 1993 to 1997. Prior to 1993, Mr. McKenney held various financial positions at Albany International.

Ms. Lambert has been a vice president and our general counsel since 2001, and our secretary since our incorporation in 1991. Prior to joining us, she was a vice president and the secretary of Thermo Electron from 1999 and 1990, respectively, to 2001 and before that was a member of Thermo Electron's legal department.

Ms. Selwood has been a vice president and our chief accounting officer since June 2015. She served as our corporate controller from 2007 to 2015 and as assistant controller from 2004 to 2007. Prior to 2004, Ms. Selwood held various financial positions at Arthur Andersen LLP and Genuity Inc.

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Item 1A. Risk Factors

Our business, results of operations and financial condition, and an investment in our securities, are subject to a number of risks. Among the risks that could materially negatively affect our results or cause our actual results to differ materially from those projected or indicated in any forward-looking statements are the following.

Adverse changes in global and local economic conditions may negatively affect our industry, business and results of operations.

We sell products worldwide to global process industries and a significant portion of our revenue is from customers based in North America, Europe and China. Uncertainties in global and regional economic outlooks have negatively affected, and may in the future negatively affect, demand for our customers' products and, as a consequence, our products and services, especially our capital equipment systems and products, and our operating results. Also, uncertainty regarding economic conditions has caused, and may in the future cause, liquidity and credit issues for many businesses, including our customers in the pulp and paper industry as well as other process industries, and may result in their inability to fund projects, capacity expansion plans, and to some extent, routine operations and capital expenditures. These conditions have resulted, and may in the future result, in a number of structural changes in process industries, including decreased spending, mill closures, consolidations, and bankruptcies, all of which negatively affect our business, revenue, and profitability. Financial and economic turmoil affecting the worldwide economy or the banking system and financial markets, in particular due to political or economic developments, could cause the expectations for our business to differ materially in the future.

Revenues from the sale of large capital equipment and systems projects are often difficult to predict accurately, especially in periods of economic uncertainty.

We manufacture capital equipment and systems used in process industries, including the paper industry. The demand for capital equipment is variable and depends on a number of factors, including consumer demand for end products, existing manufacturing capacity, the level of capital spending by our customers and economic conditions. As a consequence, our bookings and revenues for capital projects tend to be variable and difficult to predict. It is especially difficult to accurately forecast our operating results during periods of economic uncertainty. Paper and OSB companies curtail their capital and operating spending during periods of economic uncertainty and are cautious about resuming spending as market conditions improve. Levels of consumer spending on non-durable goods, demand for food and beverage packaging, and demand for new housing and remodeling are all factors that affect paper and OSB companies' demand for our products, and reductions in these demand levels can negatively impact our business. As paper and OSB companies consolidate operations in response to market weakness, they frequently reduce capacity, increase downtime, defer maintenance and upgrades, and postpone or even cancel capacity additions or expansion projects. Capacity growth and investment can be uneven and the larger paper producers have delayed, and may in the future delay, additional new capacity start-ups in reaction to softer market conditions. In general, as significant capacity additions come online and the economic growth rate slows, paper producers have deferred and could in the future defer further investments or the delivery of previously-ordered equipment until the market absorbs the new production. This has negatively affected our bookings and revenues in the past, particularly in China, and may negatively affect our operating results in the future.

Our sales of capital equipment in China tend to be more variable and are subject to a number of uncertainties.

Our bookings and revenues from China tend to be more variable than in other geographic regions, as the Chinese pulp and paper industry experiences periods of significant capacity expansion to meet demand followed by periods of reduced activity while overcapacity is absorbed. These cycles result in periods of significant bookings activity for our capital products and increased revenues followed by a significant decrease in bookings or potential delays in shipments and order placements by our customers as they attempt to balance supply and demand.

In addition, orders from customers in China, particularly for large stock-preparation systems that have been tailored to a customer's specific requirements, have credit risks higher than we generally incur elsewhere, and some orders are subject to the receipt of financing approvals from the Chinese government or can be impacted by the availability of

credit and more restrictive monetary policies. For example, in the fourth quarter of 2015 we reversed a booking of \$16 million due to uncertainty regarding financing for a project in China. We generally do not record bookings for signed contracts from customers in China for large stock-preparation systems until we receive the down payments for such contracts. The timing of the receipt of these orders and the down payments are uncertain and there is no assurance that we will be able to recognize revenue on these contracts. Delays in the receipt of payments and letters of credit affect when revenues can be recognized on these contracts, making it difficult to accurately forecast our future financial performance. We may experience a loss if a contract is canceled prior to the receipt of a down payment if we have commenced engineering or other work associated with the contract. We typically have inventory awaiting shipment to customers. We could incur a loss if contracts are canceled and we cannot re-sell the equipment. In addition, we may experience a loss if the contract is canceled, or the customer does not fulfill its obligations under the contract, prior to the receipt of a letter of credit or final payments covering the remaining balance of the contract, which could represent 80% or more of the total order.

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A significant portion of our revenue in China is recognized upon shipment once we have secured final payment. In some cases, we will be unable to recognize any revenue on completed orders until after installation or acceptance of the equipment. Furthermore, customers in China often demand that deliveries of previously-ordered equipment be delayed to future periods for any number of reasons. As a result of these factors, our revenues recognized in China have varied, and will in the future vary, greatly from period to period and be difficult to predict.

Our results of operations may be adversely affected by currency fluctuations.

As a multinational corporation, we are exposed to fluctuations in currency exchange rates that impact our business in many ways. We are exposed to both translation as well as transaction risk associated with transactions denominated in currencies that differ from our subsidiaries' functional currencies. Although in general our subsidiaries' costs are denominated in the same currency as their revenues, changes in the relative values of currencies occur from time to time and can adversely affect our operating results. Some of the foreign currency translation risk is mitigated when foreign subsidiaries have revenue and expenses in the same foreign currency. Further, certain foreign subsidiaries may hold U.S. dollar assets or liabilities which, as the U.S. dollar strengthens versus the applicable functional currencies, will result in currency transaction gains on assets or losses on liabilities. While some foreign currency risks can be hedged using derivatives or other financial instruments, or may be insurable, such attempts to mitigate these risks may be costly and not always successful.

When we translate the local currency results of our foreign subsidiaries into U.S. dollars during a period in which the U.S. dollar is strengthening, our financial results will reflect decreases due to foreign currency translation. In addition, our consolidated financial results are adversely affected when foreign governments devalue their currencies. Our major foreign currency translation exposures involve the currencies in Europe, China, Brazil, Canada and Mexico. For example, China's central bank devalued the renminbi to boost the Chinese economy in 2016, which had a negative translation impact on our consolidated revenues and will continue to have a negative translation impact if this recurs. Foreign currency translation had a negative effect on our financial results in 2016 and 2015, and is expected to continue to adversely affect our operating results in 2017. We do not enter into derivatives or other financial instruments to hedge this type of foreign currency translation risk.

The inability of our customers to obtain financing for capital equipment projects may affect our ability to recognize revenue and income.

Approximately 38% of our revenue in 2016 was from the sale of capital equipment to be used in process industries. Large capital equipment projects require a significant investment and may require our customers to secure financing from external sources. Our financial performance will be negatively impacted if there are delays in customers securing financing or our customers become unable to secure such financing due to any number of factors, including a tightening of monetary policy. For example, in the fourth quarter of 2015 we reversed a booking of \$16 million due to uncertainty regarding financing for a project in China, originally recorded in 2014. Financing has been a significant problem for customers in Russia and China, and has caused us to delay the booking of some pending orders, as well as the shipment of some orders currently in our backlog. The inability of our customers to obtain credit may affect our ability to recognize revenue and income, particularly on large capital equipment orders from new customers for which we may require letters of credit. We may also be unable to issue letters of credit to our customers, which are required in some cases to guarantee performance, during periods of economic uncertainty.

Our global operations subject us to economic risk as our results of operations may be adversely affected by changes in government regulations and policies, including restraints on international trade.

Operating globally subjects us to changes in government regulations and policies in multiple jurisdictions around the world, including those related to tariffs and trade barriers, taxation, exchange controls and political risks. Changes in government policies, political unrest, economic sanctions, trade embargoes, or other adverse trade regulations can negatively impact our business. We operate a manufacturing facility in Mexico and our business benefits from the North American Free Trade Agreement (NAFTA). If the United States were to withdraw from or materially modify NAFTA or to impose significant tariffs or taxes on goods imported into the United States, the cost of our products

could materially increase or no longer be priced competitively, which in turn could have a material adverse effect on our business and results of operations. We operate significant manufacturing facilities in and derive significant revenue from China. Changes in the policies of the Chinese government, devaluation of the Chinese currency, political unrest, unstable economic conditions, or other developments in China or in U.S.-China relations that are adverse to trade, including enactment of protectionist legislation or trade or currency restrictions, could negatively impact our business and operating results. Policies of the Chinese government to target slower economic growth may negatively affect our business in China if customers are unable to expand capacity or obtain financing for expansion or improvement projects.

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We manufacture equipment used in the production of OSB and our financial performance may be adversely affected by lower levels of residential construction activity.

We manufacture stranders and related equipment used in the production of OSB, an engineered wood panel product used primarily in home construction. Our customers produce OSB principally for new residential construction, home repair and remodeling activities. As such, the operating results for our Wood Processing Systems segment correlate to a significant degree to the level of this residential construction activity, primarily in North America and, to a lesser extent, in Europe. Residential construction activity is influenced by a number of factors, including the supply of and demand for new and existing homes, new housing starts, unemployment rates, interest rate levels, availability of mortgage financing, mortgage foreclosure rates, seasonal and unusual weather conditions, general economic conditions and consumer confidence. A significant increase in long-term interest rates, tightened lending standards, high unemployment rates and other factors that reduce the level of residential construction activity could have a material adverse effect on our financial performance.

The OSB market is highly concentrated and the market for building products is highly competitive. The loss of a significant customer or our customers' reductions in capital spending or OSB production could have a material adverse effect on our financial performance.

The OSB market is highly concentrated and there are a limited number of OSB manufacturers. The two largest customers in our Wood Processing Systems segment accounted for 48%, 32%, and 32% of its revenues in 2016, 2015, and 2014, respectively. The loss of one or more of these customers to a competitor could adversely affect our revenues and profitability. In addition, the market for building products is highly competitive. Products that compete with OSB include other wood panel products and substitutes for wood building products, such as nonfiber-based alternatives. For example, plastic, wood/plastic or composite materials may be used by builders as alternatives to OSB products. Changes in component prices, such as energy, chemicals, wood-based fibers, and nonfiber alternatives can change the competitive position of OSB relative to other available alternatives and could increase substitution. Our customers' OSB production can be adversely affected by lower-cost producers of other wood panel products and substitutes for wood building products. Lower demand for OSB products or a decline in the profitability of one or more of our customers could result in a reduction in spending on capital equipment or the shutdown or closure of an OSB mill, which could have a material adverse effect on our financial performance.

The development and increasing use of digital media has had, and will continue to have, an adverse impact on our Papermaking Systems segment.

Developments in digital media have adversely affected demand for newsprint and for printing and writing grades of paper, particularly in North America and Europe, a trend which is expected to continue. Approximately 11% of our revenue in 2016 was from customers producing newsprint and printing and writing grades of paper. Significant declines in the production of printing and writing paper grades have also led to a drop in the construction of recycled tissue mills, as those mills use printing and writing grades of waste paper as their fiber source. The increased use of digital media has had, and will continue to have, an adverse effect on demand for our products in those markets.

Price increases and shortages in raw materials and components could adversely impact our operating results.

We use a variety of raw materials and commodities to manufacture our products. Increases in the prices of such raw materials and commodities could adversely affect our operating results if we were unable to fully offset the effect of these increased costs through price increases, productivity improvements, or cost reduction programs.

We rely on suppliers to secure commodity and component products required for the manufacture of our products. A disruption in deliveries to or from suppliers or decreased availability of such components or commodities could have an adverse effect on our ability to meet our commitments to customers or increase our operating costs. We believe our sources of raw materials and component products will generally be sufficient for our needs in the foreseeable future. However, our operating results could be negatively impacted if supply is insufficient for our operations.

The raw material used in the manufacture of our fiber-based granules is obtained from two paper mills. Although we believe that our relationships with the mills are good, the mills may not continue to supply sufficient raw material.

From time to time, we have experienced some difficulty in obtaining sufficient raw material to operate at optimal production levels. We continue to work with the mills to ensure a stable supply of raw material. To date, we have been able to meet all of our customer delivery requirements, but there can be no assurance that we will be able to meet future delivery requirements. If the mills were to be unable or unwilling to supply us with sufficient fiber, we would be forced to find one or more alternative suppliers for this raw material.

We are dependent upon certain suppliers for components and raw materials.

Some of our businesses depend on certain suppliers to provide raw materials or other critical components of our equipment. If we could not obtain sufficient supplies of these components or these sources of supply ceased to be available to

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us, we could experience shortages in raw materials or be unable to meet our delivery commitments. Alternative sources of supply could be more expensive. Such events would have an adverse effect on our operating results. Our business is subject to economic, currency, political, and other risks associated with international sales and operations.

We sell our products globally and operate multiple manufacturing operations worldwide, including operations in Canada, China, Europe, Mexico, and Brazil. International revenues and operations are subject to a number of risks, including the following:

- ~~agreements may be difficult to enforce and receivables difficult to collect through a foreign country's legal system;~~
- ~~foreign customers may have longer payment cycles;~~
- ~~foreign countries may impose additional withholding taxes or otherwise tax our foreign income, impose tariffs, adopt other restrictions on foreign trade, impose currency restrictions or enact other protectionist or anti-trade measures;~~
- ~~worsening economic conditions may result in worker unrest, labor actions, and potential work stoppages;~~
- ~~political unrest may disrupt commercial activities of ours or our customers;~~
- ~~it may be difficult to repatriate funds, due to unfavorable domestic and foreign tax consequences or other restrictions or limitations imposed by foreign governments; and~~
- ~~the protection of intellectual property in foreign countries may be more difficult to enforce.~~

We operate manufacturing facilities throughout the world, which subjects us to varying risks of disrupted production. We operate businesses with significant manufacturing facilities throughout the world. Our manufacturing facilities and operations could be disrupted by natural disaster, failure of equipment and operating systems, labor strike, war, political unrest, terrorist activity, or economic upheaval. Some of these conditions are more likely to occur in certain geographic regions in which we operate. In addition, equipment and operating systems necessary for our manufacturing businesses may break down, perform poorly, or fail. Any such disruption could cause losses in efficiencies, delays in shipments of our products and the loss of sales and customers, and insurance proceeds may not adequately compensate us for our losses.

Implementing our acquisition strategy involves risks, and our failure to successfully implement this strategy could have a material adverse effect on our business.

As part of our capital allocation strategy, we aim to grow our business by selectively pursuing acquisitions to supplement our organic growth. Our strategy includes the acquisition of technologies and businesses that complement or augment our existing products and services or may involve entry into a new process industry. We are continuing to actively pursue additional acquisition opportunities, some of which may be material to our business and financial performance, and involve significant cash expenditures and the incurrence of significant debt. Although we have been successful with this strategy in the past, we may not be able to grow our business in the future through acquisitions for a number of reasons, including:

- difficulties identifying and executing acquisitions;
- competition with other prospective buyers resulting in our inability to complete an acquisition or in our paying a substantial premium over the fair value of the net assets of the acquired business;
- inability to obtain regulatory approvals, including antitrust approvals;
- difficulty in assimilating operations, technologies, products and the key employees of the acquired business;
- inability to maintain existing customers or to sell the products and services of the acquired business to our existing customers;
- inability to retain key management of the acquired business;
- diversion of management's attention from other business concerns;
- inability to improve the revenues and profitability or realize the cost savings and synergies expected of the acquisition;
- assumption of significant liabilities, some of which may be unknown at the time;

- potential future impairment of the value of goodwill and intangible assets acquired; and
- identification of internal control deficiencies of the acquired business.

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We are required to record transaction and acquisition-related costs in the period incurred. Once completed, acquisitions may involve significant integration costs. These acquisition-related costs could be significant in a reporting period and have an adverse effect on our results of operations.

Any acquisition we complete may be made at a substantial premium over the fair value of the net identifiable assets of the acquired business. We are required to assess the realizability of goodwill and indefinite-lived intangible assets annually, and whenever events or changes in circumstances indicate that goodwill and intangible assets, including definite-lived intangible assets, may be impaired. These events or circumstances would generally include operating losses or a significant decline in earnings associated with the acquired business or assets, and our ability to realize the value of goodwill and intangible assets will depend on the future cash flows of these businesses. We may incur impairment charges to write down the value of our goodwill and acquired intangible assets in the future if the assets are not deemed recoverable, which could have a material adverse effect on our operating results.

It may be difficult for us to implement our strategies for improving internal growth.

Some of the markets in which we compete are mature and have relatively low growth rates. We pursue a number of strategies to improve our internal growth, including:

- strengthening our presence in selected geographic markets, including emerging markets and existing markets where we see opportunities;
- ~~focusing on parts and consumables sales;~~
- ~~using low-cost manufacturing bases, such as China and Mexico;~~
- ~~allocating research and development funding to products with higher growth prospects;~~
- ~~developing new applications for our technologies;~~
- ~~combining sales and marketing operations in appropriate markets to compete more effectively;~~
- ~~finding new markets for our products; and~~
- continuing to develop cross-selling opportunities for our products and services to take advantage of our depth of product offerings.

We may not be able to successfully implement these strategies, and these strategies may not result in the expected growth of our business.

We are subject to intense competition in all our markets.

We believe that the principal competitive factors affecting the markets for our products include technical expertise and process knowledge, product innovation, product quality, and price. Our competitors include a number of large multinational corporations that may have substantially greater financial, marketing, and other resources than we do.

As a result, they may be able to adapt more quickly to new or emerging technologies and changes in customer requirements, or to devote greater resources to the promotion and sale of their services and products. Competitors' technologies may prove to be superior to ours. Our current products, those under development, and our ability to develop new technologies may not be sufficient to enable us to compete effectively. Competition, especially in China, has increased as new companies enter the market and existing competitors expand their product lines and manufacturing operations.

Adverse changes to the soundness of our suppliers and customers could affect our business and results of operations. All of our businesses are exposed to risk associated with the creditworthiness of our key suppliers and customers, including pulp and paper manufacturers and other industrial customers, many of which may be adversely affected by volatile conditions in the financial markets, worldwide economic downturns, and difficult economic conditions. These conditions could result in financial instability, bankruptcy, or other adverse effects at any of our suppliers or customers. The consequences of such adverse effects could include the interruption of production at the facilities of our suppliers, the reduction, delay or cancellation of customer orders, delays in or the inability of customers to obtain financing to purchase our products or pay amounts due, and bankruptcy of customers or other creditors. Any adverse changes to the soundness of our suppliers or customers may adversely affect our cash flows, profitability, or financial condition.

Changes in our tax provision or exposure to additional income tax liabilities could affect our profitability.

We derive a significant portion of our revenue and earnings from our international operations, and are subject to income and other taxes in the United States and numerous foreign jurisdictions. Changes in U.S. and foreign income tax laws and regulations, or their interpretation, could result in higher or lower income tax rates assessed or changes in the taxability of certain revenues or the deductibility of certain expenses, thereby affecting our income tax expense and profitability. A number of factors may cause our effective tax rate to fluctuate, including: changes in tax rates in various jurisdictions; unanticipated

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changes in the amount of profit in jurisdictions with low statutory tax rates; the resolution of issues arising from tax audits with various tax authorities; changes in the valuation of our deferred tax assets and liabilities; adjustments to income taxes upon finalization of various tax returns; increases in expenses not deductible for tax purposes, including impairments of goodwill in connection with acquisitions; changes in available tax credits or our ability to utilize foreign tax credits; and changes in tax laws or the interpretation of such tax laws. Corporate tax reform has emerged as a priority in the United States and continues to be a priority in other jurisdictions. Changes to the tax laws and their interpretation in the United States or other jurisdictions could have significant effects on our effective tax rate and on our deferred tax assets and liabilities. Any of these factors could cause us to experience an effective tax rate significantly different from that of prior periods or current expectations, which could have an adverse effect on our results of operations or cash flows.

We may be required to reorganize our operations in response to changing conditions in the worldwide economy and the pulp and paper industry, and such actions may require significant expenditures and may not be successful.

We have undertaken various restructuring measures in the past in response to changing market conditions in the countries in which we operate and we may engage in additional cost reduction programs in the future. The costs of these programs may be significant and we may not recoup the costs of these programs. In connection with any future plant closures, delays or failures in the transition of production from existing facilities to our other facilities in other geographic regions could also adversely affect our results of operations. In addition, it is difficult to accurately forecast our financial performance in periods of economic uncertainty in a region or globally, and the efforts we have made or may make to align our cost structure may not be sufficient or able to keep pace with rapidly changing business conditions. Our profitability may decline if our restructuring efforts do not sufficiently reduce our future costs and position us to maintain or increase our sales.

Adverse changes to the soundness of financial institutions could affect us.

We have relationships with many financial institutions, including lenders under our credit facilities and insurance underwriters, and from time to time we execute transactions with counterparties in the financial industry, such as our interest rate swap arrangements and other hedging transactions. In addition, our subsidiaries in China often hold banker's acceptance drafts that are received from customers in the normal course of business. These drafts may be discounted or used to pay vendors prior to the scheduled maturity date or submitted to an acceptance bank for payment at the scheduled maturity date. These financial institutions or counterparties could be adversely affected by volatile conditions in the financial markets, economic downturns, and difficult economic conditions. These conditions could result in financial instability, bankruptcy, or other adverse effects at these financial institutions or counterparties. We may not be able to access credit facilities in the future, complete transactions as intended, or otherwise obtain the benefit of the arrangements we have entered into with such financial parties, which could adversely affect our business and results of operations.

Our debt may adversely affect our cash flow and may restrict our investment opportunities.

We amended and restated our unsecured revolving credit facility (2017 Credit Agreement) effective March 2, 2017, and extended the term for five years and increased the aggregate principal amount we could borrow up to \$200 million. The 2017 Credit Agreement also includes an uncommitted unsecured incremental borrowing facility of up to an additional \$100 million. We have borrowed amounts under the 2017 Credit Agreement and under other agreements to fund our operations and our acquisition strategy. We may also obtain additional long-term debt and working capital lines of credit to meet future financing needs, which would have the effect of increasing our total leverage. Our indebtedness could have negative consequences, including:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- limiting our ability to pay dividends on or to repurchase our capital stock;
- limiting our ability to complete a merger or an acquisition;
- limiting our ability to acquire new products and technologies through acquisitions or licensing agreements; and

limiting our flexibility in planning for, or reacting to, changes in our business and the industries in which we compete.

Our existing indebtedness bears interest at floating rates, and as a result, our interest payment obligations on our indebtedness will increase if interest rates increase. From time to time, we hedge a portion of our variable rate interest payment obligations through interest rate swap agreements. The counterparty to the swap agreements could demand an early termination of the swap agreements if we were to be in default under the 2017 Credit Agreement, or any agreement that amends or replaces the 2017 Credit Agreement in which the counterparty is a member, and we were unable to cure the default. If our swap

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agreements were to be terminated prior to the applicable scheduled maturity date and if we were required to pay cash for the value of the swap, we could incur a loss, which could adversely affect our financial results.

Our ability to satisfy our obligations and to reduce our total debt depends on our future operating performance and on economic, financial, competitive, and other factors beyond our control. Our business may not generate sufficient cash flows to meet these obligations or to successfully execute our business strategy. The 2017 Credit Agreement includes certain financial covenants, and our failure to comply with these covenants could result in an event of default under the 2017 Credit Agreement, the swap agreement, and our other credit facilities, and would have significant negative consequences for our current operations and our future ability to fund our operations and grow our business. If we were unable to service our debt and fund our business, we could be forced to reduce or delay capital expenditures or research and development expenditures, seek additional financing or equity capital, restructure or refinance our debt, curtail or eliminate our cash dividend to stockholders, or sell assets.

Restrictions in our 2017 Credit Agreement may limit our activities.

Our 2017 Credit Agreement contains, and future debt instruments to which we may become subject may contain, restrictive covenants that limit our ability to engage in activities that could otherwise benefit us, including restrictions on our ability and the ability of our subsidiaries to:

- ~~incur additional indebtedness;~~
- ~~pay dividends on, redeem, or repurchase our capital stock;~~
- ~~make investments;~~
- ~~create liens;~~
- ~~sell assets;~~
- ~~enter into transactions with affiliates; and~~
- ~~consolidate, merge, or transfer all or substantially all of our assets and the assets of our subsidiaries.~~

We are also required to meet specified financial covenants under the terms of our 2017 Credit Agreement. Our ability to comply with these financial restrictions and covenants is dependent on our future performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control such as currency exchange rates, interest rates, changes in technology, and changes in the level of competition. Our failure to comply with any of these restrictions or covenants may result in an event of default under our 2017 Credit Agreement and other loan obligations, which could permit acceleration of the debt under those instruments and require us to repay the debt before its scheduled due date. If an event of default were to occur, we might not have sufficient funds available to make the payments required under our indebtedness. In addition, our inability to borrow funds under the 2017 Credit Agreement would have significant consequences for our business, including reducing funds available for acquisitions and other investments in our business; and impacting our ability to pay dividends and meet other financial obligations. Furthermore, our 2017 Credit Agreement requires that any amounts borrowed under the facility be repaid by the maturity date in 2022. If we are unable to roll over the amounts borrowed into a new credit facility and we do not have sufficient cash to repay our borrowings, we may default under the 2017 Credit Agreement. We may need to repatriate cash from our overseas operations to fund the repayment and we would be required to pay taxes on the repatriated amounts. Such repatriation would have an adverse effect on our effective tax rate and cash flows.

Our future success is substantially dependent on the continued service of our senior management and other key employees.

Our future success is substantially dependent on the continued service of our senior management and other key employees. The loss of the services of our senior management or other key employees could make it more difficult to successfully operate our business and achieve our business goals. We also may be unable to retain existing management, product development, sales, operational and other support personnel that are critical to our success, which could result in harm to key customer relationships, loss of key information, expertise, or know-how, and unanticipated recruitment and training costs.

We have not independently verified the results of third-party research or confirmed assumptions or judgments on which they may be based, and the forecasted and other forward-looking information contained therein is subject to inherent uncertainties.

We refer in this report and other documents that we file with the SEC to historical, forecasted and other forward-looking information published by sources such as Resource Information Systems Inc., Forest Economic Advisors, the U.S. Census Bureau, and various market news agencies that we believe to be reliable. However, we have not independently verified this information, and with respect to the forecasted and forward-looking information, have not independently confirmed the assumptions and judgments upon which such information is based. Forecasted and other forward-looking information is

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necessarily based on assumptions regarding future occurrences, events, conditions and circumstances and subjective judgments relating to various matters, and is subject to inherent uncertainties. Actual results may differ materially from the results expressed or implied by, or based upon, such forecasted and forward-looking information.

Our inability to protect our intellectual property or defend ourselves against the intellectual property claims of others could have a material adverse effect on our business. In addition, litigation to enforce our intellectual property and contractual rights or defend ourselves could result in significant litigation or licensing expense.

We seek patent and trade secret protection for significant new technologies, products, and processes because of the length of time and expense associated with bringing new products through the development process and into the marketplace. We own numerous U.S. and foreign patents and we intend to file additional applications, as appropriate, for patents covering our products. Patents may not be issued for any pending or future patent applications owned by or licensed to us, and the claims allowed under any issued patents may not be sufficiently broad to protect our technology. Any issued patents owned by or licensed to us may be challenged, invalidated, or circumvented, and the rights under these patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture increased market share. In addition, as our patents expire, we rely on trade secrets and proprietary know-how to protect our products. We cannot be sure the steps we have taken, or will take in the future, will be adequate to deter misappropriation of our proprietary information and intellectual property. Of particular concern are developing countries, such as China, where the laws, courts, and administrative agencies may not protect our intellectual property rights as fully as in the United States or Europe.

We seek to protect trade secrets and proprietary know-how, in part, through confidentiality and non-competition agreements with our collaborators, employees, and consultants. These agreements may be breached, we may not have adequate remedies for any breach, and our trade secrets may otherwise become known or be independently developed by our competitors, or our competitors may otherwise gain access to our intellectual property.

We could incur substantial costs to defend ourselves in suits brought against us, including for alleged infringement of third-party rights, or in suits in which we may assert our intellectual property or contractual rights against others. An unfavorable outcome of any such litigation could have a material adverse effect on our business and results of operations.

Failure of our information systems or breaches of data security and cybertheft could impact our business.

We operate a geographically dispersed business and rely on the electronic storage and transmission of proprietary and confidential information, including technical and financial information, among our operations, customers and suppliers. In addition, for some of our operations, we rely on information systems controlled by third parties. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or cyberthieves or breaches due to employee error, malfeasance or other disruptions. As part of our ongoing effort to upgrade our current information systems, we are implementing new enterprise resource planning software to manage certain of our business operations. As we implement and add functionality, problems could arise that we have not foreseen. System failures, network disruptions, and breaches of data security could limit our ability to conduct business as usual, including our ability to communicate and transact business with our customers and suppliers; result in the loss or misuse of this information, the loss of business or customers, or damage to our brand or reputation; or interrupt or delay reporting our financial results. Such system failures or unauthorized access could be caused by external theft or attack, misconduct by our employees, suppliers, or competitors, or natural disasters. In addition, the cost and operational consequences of implementing further data protection measures could be significant.

Our share price fluctuates and experiences price and volume volatility.

Stock markets in general and our common stock in particular experience significant price and volume volatility from time to time. The market price and trading volume of our common stock may continue to be subject to significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding

our operations, business prospects, or future funding. Given the nature of the markets in which we participate and the volatility of orders, we may not be able to reliably predict future revenues and profitability, and unexpected changes may cause us to adjust our operations. A large proportion of our costs are fixed, due in part to our significant selling, research and development, and manufacturing costs. Thus, small declines in revenues could disproportionately affect our operating results. Other factors that could affect our share price and quarterly operating results include:

- failure of our products to pass contractually agreed upon acceptance tests, which would delay or prohibit recognition of revenues under applicable accounting guidelines;
- changes in the assumptions used for revenue recognized under the percentage-of-completion method of accounting;
- fluctuations in revenues due to customer-initiated delays in product shipments;

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failure of a customer to comply with an order's contractual obligations or inability of a customer to provide financial assurances of performance;  
adverse changes in demand for and market acceptance of our products;  
competitive pressures resulting in lower sales prices for our products;  
adverse changes in the process industries we serve;  
delays or problems in our introduction of new products;  
delays or problems in the manufacture of our products;  
our competitors' announcements of new products, services, or technological innovations;  
contractual liabilities incurred by us related to guarantees of our product performance;  
increased costs of raw materials or supplies, including the cost of energy;  
changes in the timing of product orders;  
changes in the estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, or expenses;  
the impact of acquisition accounting, including the treatment of acquisition and restructuring costs as period costs;  
fluctuations in our effective tax rate;  
the operating and share price performance of companies that investors consider to be comparable to us; and  
changes in global financial markets and global economies and general market conditions.

Anti-takeover provisions in our charter documents and under Delaware law could prevent or delay transactions that our shareholders may favor.

Provisions of our charter and bylaws may discourage, delay, or prevent a merger or acquisition that our shareholders may consider favorable, including transactions in which shareholders might otherwise receive a premium for their shares. For example, these provisions:

authorize the issuance of "blank check" preferred stock without any need for action by shareholders;  
provide for a classified board of directors with staggered three-year terms;  
require supermajority shareholder voting to effect various amendments to our charter and bylaws;  
eliminate the ability of our shareholders to call special meetings of shareholders;  
prohibit shareholder action by written consent; and  
establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by shareholders at shareholder meetings.

Prior to July 2011, we had a shareholder rights plan, which may have had anti-takeover effects under certain circumstances. This shareholder rights plan expired by its terms in July 2011 and was not renewed by our board of directors. However, our board of directors could adopt a new shareholder rights plan in the future that could have anti-takeover effects and might discourage, delay, or prevent a merger or acquisition that our board of directors does not believe is in our best interests and those of our shareholders, including transactions in which shareholders might otherwise receive a premium for their shares.

Economic conditions and regulatory changes caused by the United Kingdom's likely exit from the European Union could adversely affect our business.

The announcement in June 2016 that voters in the United Kingdom (U.K.) have approved an exit from the European Union (E.U.), referred to as Brexit, resulted in volatility in the global stock markets as well as currency exchange rate fluctuations. The announcement of Brexit and likely withdrawal of the U.K. from the E.U. may also create global economic uncertainty at various periods throughout the process, which may cause our customers to closely monitor their costs and reduce their spending budgets. This could adversely affect our business, financial condition, operating results, and cash flows. Our revenues to customers in the U.K. represented approximately 3% of total revenues in 2016.



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Item 1B. Unresolved Staff Comments  
Not applicable.

Item 2. Properties

We believe that our facilities are in good condition and are suitable and adequate for our present operations. We do not anticipate significant difficulty in obtaining lease renewals or alternative space as needed. The location and general character of our principal properties as of year-end 2016 are as follows:

Papermaking Systems Segment

We own approximately 1,788,000 square feet and lease approximately 333,000 square feet, under leases expiring on various dates ranging from 2017 to 2023, of manufacturing, engineering, and office space. In addition, in China, we lease the land associated with our buildings under long-term leases, which expire on dates ranging from 2049 to 2061.

Our principal engineering and manufacturing facilities are located in Vitry-le-Francois, France; Jining, China; Valinhos, Brazil; Three Rivers, Michigan, United States; Georgsmarienhutte, Germany; Auburn, Massachusetts, United States; Theodore, Alabama, United States; Weesp, The Netherlands; Alfreton, England; Wuxi, China; Guadalajara, Mexico; Bury, England; Mason, Ohio, United States; Huskvarna, Sweden; and Norrkoping, Sweden.

Wood Processing Systems Segment

We lease approximately 56,000 square feet of manufacturing and office space located in Surrey, British Columbia, Canada, under a lease expiring in 2023.

Fiber-based Products

We own approximately 31,000 square feet of manufacturing and office space located in Green Bay, Wisconsin, United States. We also lease approximately 58,000 square feet of manufacturing space located in Green Bay, Wisconsin, United States on a tenant-at-will basis.

Corporate

We lease approximately 15,000 square feet in Westford, Massachusetts, United States, for our corporate headquarters under a lease expiring in 2023.

Item 3. Legal Proceedings  
Not applicable.

Item 4. Mine Safety Disclosures  
Not applicable.

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## PART II

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

## Market Price of Common Stock

Our common stock trades on the New York Stock Exchange under the symbol "KAI". The closing market price on the New York Stock Exchange for our common stock on March 3, 2017 was \$59.80 per share.

The following table sets forth the high and low sales prices of our common stock for 2016 and 2015, as reported in the consolidated transaction reporting system.

Quarter	2016		2015	
	High	Low	High	Low
First	\$45.99	\$33.38	\$55.20	\$39.53
Second	53.16	44.24	56.29	44.67
Third	56.57	50.59	47.95	37.72
Fourth	64.75	49.20	44.37	38.99

The following table sets forth the per share dividends declared on our common stock for 2016 and 2015.

Quarter	2016	2015
First	\$0.19	\$0.17
Second	\$0.19	\$0.17
Third	\$0.19	\$0.17
Fourth	\$0.19	\$0.17

On March 8, 2017, our board of directors declared a quarterly cash dividend of \$0.21 per share, payable on May 11, 2017, and we expect to pay comparable cash dividends in the future. Nonetheless, the payment of dividends in the future will be at the discretion of the board of directors and will depend upon our earnings, capital requirements, and financial condition, among other factors. The payment of cash dividends is subject to our compliance with the consolidated leverage ratio contained in our 2017 Credit Agreement.

## Holders of Common Stock

As of February 17, 2017, we had approximately 2,897 holders of record of our common stock. This does not include holdings in street or nominee name.

## Issuer Purchases of Equity Securities

We did not repurchase any shares of our common stock during the fourth quarter of 2016.

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## Performance Graph

This performance graph compares the cumulative, five-year total shareholder return assuming an investment of \$100 (and the reinvestment of dividends) in our common stock, the Russell 3000 Stock Index, Dow Jones U.S. Paper Total Stock Market (TSM) Index and the Dow Jones U.S. Industrial Machinery Paper TSM Index. This year, we are changing our peer group from the Dow Jones U.S. Paper TSM Index to the Dow Jones U.S. Industrial Machinery Paper TSM Index, and accordingly, are presenting both peer groups. Our common stock trades on the New York Stock Exchange under the ticker symbol "KAI." Because our fiscal year ends on a Saturday, the graph values are calculated using the last trading day prior to the end of our fiscal year.

	12/31/2011	12/29/2012	12/28/2013	1/3/2015	1/2/2016	12/31/2016
Kadant Inc.	100.00	116.14	182.70	192.76	187.43	287.02
Russell 3000	100.00	114.45	154.84	174.90	175.84	198.23
Dow Jones U.S. Paper TSM	100.00	124.15	169.54	186.50	139.34	160.91
Dow Jones U.S. Industrial Machinery Paper TSM	100.00	120.24	178.51	177.03	154.89	210.09

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## Item 6. Selected Financial Data

(In thousands, except per share amounts)	2016	2015	2014	2013	2012 (c)
Statement of Income Data (a)					
Revenues (b)	\$414,126	\$390,107	\$402,127	\$344,499	\$331,751
Operating Income	45,573	50,119	42,086	33,303	36,444
Amounts Attributable to Kadant:					
Income from Continuing Operations	32,074	34,315	28,682	23,481	30,880
Income (Loss) from Discontinued Operation	3	74	(23)	(62)	743
Net Income	\$32,077	\$34,389	\$28,659	\$23,419	\$31,623
Earnings per Share for Continuing Operations:					
Basic	\$2.95	\$3.16	\$2.61	\$2.11	\$2.70
Diluted	\$2.88	\$3.09	\$2.56	\$2.07	\$2.66
Earnings per Share:					
Basic	\$2.95	\$3.16	\$2.61	\$2.10	\$2.76
Diluted	\$2.88	\$3.10	\$2.56	\$2.07	\$2.73
Cash Dividends Declared per Common Share	\$0.76	\$0.68	\$0.60	\$0.50	\$—
Balance Sheet Data					
Working Capital (d)	\$118,437	\$108,492	\$96,504	\$106,486	\$100,301
Total Assets	470,691	415,498	413,747	442,168	358,948
Long-Term Obligations (e)	65,768	26,000	25,250	38,010	6,250
Stockholders' Equity	284,279	267,945	265,459	270,421	249,967

(a) Fiscal year 2016 and 2015 each contained 52 weeks, fiscal year 2014 contained 53 weeks, and fiscal years 2013 and 2012 each contained 52 weeks.

(b) Includes incremental revenues of \$40.8 million in 2016 and \$29.6 million in 2014 from the acquisitions of PAAL in April 2016 and the Wood Processing Systems business in November 2013, respectively.

(c) Includes a \$4.6 million discrete tax benefit primarily due to the reversal of valuation allowances on certain deferred tax assets.

(d) Includes net current deferred tax assets of \$9.5 million, \$10.1 million, and \$8.4 million in 2014, 2013, and 2012, respectively. We adopted Accounting Standards Update (ASU) No. 2015-07 for year-end 2015, which required that deferred tax assets and liabilities be classified as non-current. Prior period amounts have not been restated.

(e) Includes additional borrowings of \$27.5 million and \$24.3 million for the acquisitions of PAAL in April 2016 and the Wood Processing Systems business in November 2013, respectively.

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

Reference is made throughout this Management's Discussion and Analysis of Financial Condition and Results of Operations to Notes included in our consolidated financial statements beginning on page F-1 of this Report.

## Overview

## Company Overview

We are a leading global supplier of equipment and critical components used in process industries worldwide. In addition, we manufacture granules made from papermaking by-products. We have a diverse and large customer base, including most of the world's major paper and OSB manufacturers, and our products, technologies, and services play an integral role in enhancing process efficiency, optimizing energy utilization, and maximizing productivity in resource-intensive industries. We believe our large installed base provides us with a spare parts and consumables business that yields higher margins than our capital equipment business. In 2016, approximately 62% of our revenue

was from the sale of parts and consumables products.

Our continuing operations are comprised of two reportable operating segments: Papermaking Systems and Wood Processing Systems, and a separate product line, Fiber-based Products. Through our Papermaking Systems segment, we develop, manufacture, and market a range of equipment and products for the global papermaking, paper recycling, recycling and waste management, and other process industries. Through our Wood Processing Systems segment, we develop, manufacture, and market stranders and related equipment used in the production of OSB, and sell debarking and wood chipping equipment used in the forest products and the pulp and paper industries. Through this segment, we also provide refurbishment

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and repair of pulping equipment for the pulp and paper industry. Through our Fiber-based Products business, we manufacture and sell granules derived from pulp fiber for use as carriers for agricultural, home lawn and garden, and professional lawn, turf and ornamental applications, as well as for oil and grease absorption.

2016 Acquisition

On April 4, 2016, we acquired all the outstanding shares of RT Holding GmbH, the parent corporation of a group of companies known as the PAALGROUP (PAAL), for approximately 49.7 million euros, net of cash acquired, or approximately \$56.6 million. We paid additional post-closing consideration of \$0.2 million to the sellers in the first quarter of 2017. PAAL manufactures balers and related equipment used in the processing of recyclable and waste materials. This acquisition, which is included in our Papermaking Systems segment's Stock-Preparation product line, broadened our product portfolio and extended our presence deeper into recycling and waste management. PAAL, headquartered in Germany, also has operations in the United Kingdom, France, and Spain.

International Sales

During 2016 and 2015, approximately 60% and 50%, respectively, of our sales were to customers outside the United States, principally in Europe and Asia. The increase in the percentage of sales to customers outside the United States was primarily due to the acquisition of PAAL. We generally seek to charge our customers in the same currency in which our operating costs are incurred. However, our financial performance and competitive position can be affected by currency exchange rate fluctuations affecting the relationship between the U.S. dollar and foreign currencies. We seek to reduce our exposure to currency fluctuations through the use of forward currency exchange contracts. We may enter into forward contracts to hedge certain firm purchase and sale commitments denominated in currencies other than our subsidiaries' functional currencies.

Application of Critical Accounting Policies and Estimates

Management's discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of our consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Our actual results may differ from these estimates under different assumptions or conditions. Critical accounting policies are defined as those that entail significant judgments and uncertainties, and could potentially result in materially different results under different assumptions and conditions. We believe that our most critical accounting policies upon which our financial position depends, and which involve the most complex or subjective decisions or assessments, are those described below. For a discussion on the application of these and other accounting policies, see Note 1 to the consolidated financial statements.

**Revenue Recognition and Accounts Receivable.** Most of our revenue is recognized under Accounting Standards Codification (ASC) 605, "Revenue Recognition" (ASC 605), when the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or service has been rendered, the sales price is fixed or determinable, and collectability is reasonably assured. We also enter into arrangements with customers that have multiple deliverables, such as equipment and installation, and we recognize revenues and profits on certain long-term contracts using the percentage-of-completion and completed-contract methods of accounting.

**Revenue Recognition Methods.** Under ASC 605, when the terms of sale include customer acceptance provisions, and compliance with those provisions cannot be demonstrated until customer acceptance, we recognize revenues upon such acceptance. The Company includes in revenues amounts invoiced for shipping and handling with the corresponding costs reflected in cost of revenues. Provisions for discounts, warranties, returns, and other adjustments are provided for in the period in which the related sales are recorded. Sales taxes, value-added taxes and certain excise

taxes collected from customers and remitted to governmental authorities are accounted for on a net basis and are therefore excluded from revenue.

Most of our revenue is recognized in accordance with the accounting policies in the preceding paragraph. However, when a sale arrangement involves multiple elements, such as equipment and installation, we consider the guidance in ASC 605. Such transactions are evaluated to determine whether the deliverables in the arrangement represent separate units of accounting based on the following criteria: the delivered item has value to the customer on a stand-alone basis, and if the contract includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially under our control. Revenue is allocated to each unit of accounting or element based on relative selling prices and is recognized as each element is delivered or completed. We determine relative selling prices by using either vendor-specific objective evidence

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(VSOE) if that exists, or third-party evidence of selling price. When neither VSOE or third-party evidence of selling price exists for a deliverable, we use our best estimate of the selling price for that deliverable. In cases in which elements cannot be treated as separate units of accounting, the elements are combined into a single unit of accounting for revenue recognition purposes.

The complexity of all issues related to the assumptions, risks, and uncertainties inherent in the application of ASC 605 affects the amounts reported as revenues in our consolidated financial statements. Under ASC 605, we may not be able to reliably predict future revenues and profitability due to the difficulty of estimating when installation will be performed or when we will meet the contractually agreed upon performance tests, which can delay or prohibit recognition of revenues. The determination of when we install the equipment or fulfill the performance guarantees is largely dependent on our customers, their willingness to allow installation of the equipment or performance of the appropriate tests in a timely manner, and their cooperation in addressing possible problems that would impede achievement of the performance guarantee criteria. Unexpected changes in the timing related to the completion of installation or performance guarantees could cause our revenues and earnings to be significantly affected.

**Percentage-of-Completion.** Revenues recorded under the percentage-of-completion method of accounting pursuant to ASC 605 were \$23.3 million, \$32.1 million, and \$19.1 million in 2016, 2015, and 2014, respectively. We determine the percentage of completion by comparing the actual costs incurred to date to an estimate of total costs to be incurred on each contract. If a loss is indicated on any contract in process, a provision is made currently for the entire loss. Our contracts generally provide for billing of customers upon the attainment of certain milestones specified in the contract. Revenues earned on contracts in process in excess of billings are classified as unbilled contract costs and fees, and amounts billed in excess of revenues earned are classified as billings in excess of contract costs and fees, which are included in other current liabilities. The estimation process under the percentage-of-completion method affects the amounts reported in our consolidated financial statements. A number of internal and external factors affect our percentage-of-completion and cost of sales estimates, including labor rate and efficiency variances, estimates of warranty costs, estimated future material prices from vendors, and customer specification and testing requirements. Although we make every effort to ensure the accuracy of our estimates in the application of this accounting policy, if our actual results were to differ from our estimates, or if we were to use different assumptions, it is possible that materially different amounts could be reported as revenues in our consolidated financial statements.

**Completed-Contract Method.** For long-term contracts that do not meet the criteria under ASC 605-35 to be accounted for under the percentage-of-completion method, we recognize revenue, primarily in China, using the completed-contract method. When using the completed-contract method, we recognize revenue when the contract has been substantially completed, the product has been delivered, and, if applicable, the customer acceptance criteria have been met.

We exercise judgment in determining our allowance for doubtful accounts, which is based on our historical collection experience, current trends, credit policies, specific customer collection issues, and accounts receivable aging categories. In determining this allowance, we look at historical write-offs of our receivables. We also look at current trends in the credit quality of our customer base as well as changes in our credit policies. We perform ongoing credit evaluations of our customers and adjust credit limits based upon payment history and each customer's current creditworthiness. We continuously monitor collections and payments from our customers. In addition, in some instances we utilize letters of credit to mitigate credit exposure. While actual bad debts have historically been within our expectations and the provisions established, we cannot guarantee that we will continue to experience the same rate of bad debts that we have had in the past. A significant change in the liquidity or financial position of any of our customers could result in the uncollectibility of the related accounts receivable and could adversely affect our operating results and cash flows in that period.

**Warranty Obligations.** We offer warranties of various durations to our customers depending upon the specific product and terms of the customer purchase agreement. We typically negotiate terms regarding warranty coverage and length of warranty depending on the products and their applications. Our standard mechanical warranties require us to repair

or replace a defective product during the warranty period at no cost to the customer. We record an estimate for warranty-related costs at the time of sale based on our actual historical occurrence rates and repair costs, as well as knowledge of any specific warranty problems that indicate that projected warranty costs may vary from historical patterns. These estimates are revised for variances between actual and expected claims rates. While our warranty costs have historically been within our expectations and the provisions established, we may not continue to experience the same warranty return rates or repair costs that we have in the past.

A significant increase in warranty occurrence rates or costs to repair our products would lead to an increase in the warranty provision and could have a material adverse impact on our consolidated results for the period or periods in which such returns or additional costs occur.

Income Taxes. We operate in numerous countries under many legal forms and, as a result, are subject to the jurisdiction of numerous domestic and non-U.S. tax authorities, as well as to tax agreements and treaties among these governments.

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Determination of taxable income in any jurisdiction requires the interpretation of the related tax laws and regulations and the use of estimates and assumptions regarding significant future events, such as the amount, timing and character of deductions, permissible revenue recognition methods under the tax law and the sources and character of income and available tax credits. Changes in tax laws, regulations, agreements and treaties, currency-exchange restrictions or our level of operations or profitability in each taxing jurisdiction could have an impact upon the amount of current and deferred tax balances and our results of operations.

We estimate the degree to which our deferred tax assets on deductible temporary differences and tax loss or credit carryforwards will result in an income tax benefit based on the expected profitability by tax jurisdiction, and provide a valuation allowance for these deferred tax assets if it is more likely than not that they will not be realized in the future. If it were to become more likely than not that these deferred tax assets would be realized, we would reverse the related valuation allowance. Our tax valuation allowance was \$10.9 million at year-end 2016. Should our actual future taxable income by tax jurisdiction vary from our estimates, additional allowances or reversals thereof may be necessary. When assessing the need for a valuation allowance in a tax jurisdiction, we evaluate the weight of all available evidence to determine whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized. As part of this evaluation, we consider our cumulative three-year history of earnings before income taxes, taxable income in prior carryback years, future reversals of existing taxable temporary differences, prudent and feasible tax planning strategies, and expected future results of operations. As of year-end 2016, we continued to maintain a valuation allowance in the United States against certain of our state operating loss carryforwards due to the uncertainty of future profitability in these state jurisdictions in the United States. As of year-end 2016, we maintained valuation allowances in certain foreign jurisdictions because of the uncertainty of future profitability. In the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. It is our policy to provide for uncertain tax positions and the related interest and penalties based upon our assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. At year-end 2016, we believe that we have appropriately accounted for any liability for unrecognized tax benefits. To the extent we prevail in matters for which a liability for an unrecognized tax benefit is established or are required to pay amounts in excess of the liability, our effective tax rate in a given financial statement period may be affected.

We reinvest certain earnings of our international subsidiaries indefinitely, and accordingly, we do not provide for U.S. income taxes that could result from the remittance of such foreign earnings. Through year-end 2016, we have not provided for U.S. income taxes on approximately \$182.2 million of unremitted foreign earnings. The U.S. tax cost has not been determined due to the fact that it is not practicable to estimate at this time. The related foreign tax withholding, which would be required if we were to remit these foreign earnings to the United States, would be approximately \$4.0 million.

**Valuation of Goodwill and Intangible Assets.** We evaluate the recoverability of goodwill and indefinite-lived intangible assets as of the end of each fiscal year, or more frequently if events or changes in circumstances, such as a significant decline in sales, earnings, or cash flows, or material adverse changes in the business climate, indicate that the carrying value of an asset might be impaired. Testing goodwill for impairment involves a two-step quantitative process. However, prior to performing the two-step quantitative goodwill impairment test, we have the option to first perform an assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount.

At year-end 2016, we performed a qualitative goodwill impairment analysis. This impairment analysis included an assessment of certain qualitative factors including the results of prior fair value calculations, the movement of our share price and market capitalization, the reporting unit and overall financial performance, and macroeconomic and industry conditions. We considered the qualitative factors and weighed the evidence obtained, and determined that it was not more likely than not that the fair value of any of the reporting units was less than its carrying amount. Although we believe the factors considered in the impairment analysis are reasonable, significant changes in any one of the assumptions used could have produced a different result.

At year-end 2016, we performed a quantitative impairment analysis on our indefinite-lived intangible asset and determined that the asset was not impaired.

Intangible assets subject to amortization are evaluated for impairment if events or changes in circumstances indicate that the carrying value of an asset might be impaired. No indicators of impairment were identified in 2016.

We use assumptions and estimates in determining the fair value of assets acquired and liabilities assumed in a business combination. The determination of the fair value of intangible assets, which represent a significant portion of the purchase price in many of our acquisitions, requires the use of significant judgment regarding the fair value; and whether such intangibles are amortizable or non-amortizable and, if amortizable, the period and the method by which the intangible asset will be amortized. We estimate the fair value of acquisition-related intangible assets principally based on projections of cash flows that will arise from identifiable intangible assets of acquired businesses. The projected cash flows are discounted to determine the present value of the assets at the date of acquisition. Our judgments and assumptions regarding the determination of the fair value of an intangible asset or goodwill associated with an acquired business could change as future events impact such fair values. A prolonged economic downturn, weakness in demand for our products, especially capital equipment products, or contraction in capital spending by paper companies or OSB manufacturers in our key markets could negatively affect the revenue and profitability assumptions used in our assessment of goodwill and intangible assets, which could result in additional impairment

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charges. Any future impairment loss could have a material adverse effect on our long-term assets and operating expenses in the period in which an impairment is determined to exist.

**Inventories.** We value our inventory at the lower of the actual cost (on a first-in, first-out; or weighted average basis) or market value and include materials, labor, and manufacturing overhead. We regularly review inventory quantities on hand and compare these amounts to historical and forecasted usage of and demand for each particular product or product line. We record a charge to cost of revenues for excess and obsolete inventory to reduce the carrying value of the inventories to net realizable value. Inventory write-downs have historically been within our expectations and the provisions established. A significant decrease in demand for our products could result in an increase in the amount of excess inventory quantities on hand, resulting in a charge for the write-down of that inventory in that period. In addition, our estimates of future product usage or demand may prove to be inaccurate, resulting in an understated or overstated provision for excess and obsolete inventory. Therefore, although we make every effort to ensure the accuracy of our forecasts of future product usage and demand, any significant unanticipated changes in demand or technological developments could have a significant impact on the value of our inventory and our reported operating results.

**Pension and Other Post-Retirement Benefits.** We sponsor a noncontributory defined benefit retirement plan for the benefit of eligible employees at our Kadant Solutions division and the corporate office. Our unfunded benefit obligation related to this plan was \$3.0 million at year-end 2016 and the fair value of plan assets was \$29.0 million. In addition, several of our U.S. and non-U.S. subsidiaries sponsor defined benefit pension and other post-retirement benefit plans with an aggregate unfunded benefit obligation of \$6.8 million at year-end 2016 and a fair value of plan assets of \$0.5 million.

The cost and obligations of these arrangements are calculated using many assumptions to estimate the benefits that the employee earns while working, the amount of which cannot be completely determined until the benefit payments cease. Major assumptions used in accounting for these employee benefit plans include the discount rate, expected return on plan assets and rate of increase in employee compensation levels. Assumptions are determined based on Company data and appropriate market indicators in consultation with third-party actuaries, and are evaluated each year as of the plans' measurement dates. The fair value of plan assets is determined based on quoted market prices and observable market inputs. The unrecognized actuarial loss before tax associated with these plans totaled \$9.0 million at year-end 2016, \$0.5 million of which we expect to recognize in 2017. Should any of these assumptions change, they would have an effect on net periodic benefit costs and the unfunded benefit obligation. The projected benefit obligation and expense associated with these plans are sensitive to changes in the discount rate. For the noncontributory defined benefit pension plan at our Kadant Solutions division, a 50 basis point decrease in the 2016 discount rate would have resulted in an increase in net periodic benefit costs of \$0.2 million and an increase in the projected benefit obligation of \$2.5 million.

**Industry and Business Outlook**

Our products are primarily sold in global process industries and used to produce packaging, tissue, and engineered wood. In 2016, approximately 63% of our revenue was from the sale of products that support packaging, tissue, and other paper production, other than printing and writing and newsprint paper grades. Consumption of packaging, which is primarily comprised of containerboard and boxboard, is driven by many factors, including regional economic conditions, consumer spending on non-durable goods, demand for food and beverage packaging, greater urbanization in developing regions and existing manufacturing capacity. Consumption of tissue is fairly stable and in the developed world tends to grow with the population. For both tissue and packaging, growth rates in the developing world are expected to increase as per capita consumption of paper increases with rising standards of living. In 2016, 11% of our revenue was related to products that support printing and writing paper grades as well as newsprint, which have been negatively affected by the development and increased use of digital media. While we expect the decline in the use of printing and writing and newsprint paper grades to continue due to the use of digital media, we expect global

packaging and tissue production to be stable or to increase. For balers and related equipment, demand is generally driven by rising standards of living and population growth, shortage and costs of landfilling, increasing recycling rates, and environmental regulation. In 2016, 9% of our revenue was from sales to OSB producers who manufacture engineered wood panels for the housing industry. The majority of OSB demand is in North America, as North American houses are more often constructed of wood compared to other parts of the world. Demand for OSB is tied to new home construction and remodeling. The remainder of our revenue was from sales to other process industries, which in general grow with the overall economy.

Our results of operations were negatively affected by foreign currency translation in 2016 compared to 2015, and we expect our results of operations to continue to be negatively affected in 2017. China's central bank devalued the renminbi to boost the Chinese economy in 2016, which had a negative translation impact on our consolidated revenues and operating results and will continue to have a negative translation impact if this recurs. When we translate the local currency results of our foreign subsidiaries into U.S. dollars during a period in which the U.S. dollar is strengthening, our financial results will reflect decreases due to foreign currency translation. The negative effect on our financial results will continue if the U.S. dollar continues to strengthen relative to the functional currencies of our foreign subsidiaries. Similarly, if the U.S. dollar weakens compared to the functional currencies of our foreign subsidiaries, our financial results will reflect increases due to foreign

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currency translation. Further, certain foreign subsidiaries may hold U.S. dollar assets or liabilities which, as the U.S. dollar strengthens versus the applicable functional currencies, will result in currency transaction gains on assets and losses on liabilities. We have presented the material effects of foreign currency translation on our financial results under Results of Operations below.

Our bookings increased 7% to \$403 million in 2016, including a \$39 million, or 10%, increase from an acquisition offset in part by a \$9 million, or 2%, decrease from the unfavorable effects of foreign currency translation. Our bookings in 2015 of \$376 million included a \$16 million booking reversal. Our revenue, bookings, and income tend to be variable as demand for our capital equipment is dependent on regional economic conditions and the level of capital spending by our customers, among other factors. Demand for our parts and consumables products tends to be more predictable. Bookings for our parts and consumables products were \$258 million, or 64% of total bookings, in 2016, compared to \$252 million, or 67%, in 2015.

The largest and most impactful regional market for our products in 2016 was North America, and we expect this will continue to be the case in 2017. Our bookings in North America were \$195 million in 2016, down 8% compared to 2015. During 2016, demand for printing, writing, and newsprint grades all declined compared to 2015, while containerboard shipments saw a modest increase according to Resource Information Systems Inc. (RISI) reports. RISI reported that North American capacity expansion in the containerboard segment is expected to increase from the 1.0% rate recorded in 2016 to 1.9% in 2017, consistent with our increased project activity in North America in the latter half of 2016. U.S. housing starts in December 2016 were at a seasonally adjusted annual rate of 1.279 million, up 10.3% compared to December 2015, according to the U.S. Census Bureau. This growth is expected to have a positive impact on demand for U.S. lumber and structural wood panels, which includes OSB.

We saw steady business activity in Europe in 2016 compared to 2015. We expect the overall economy to remain stable in Europe in 2017. Our bookings in Europe were \$114 million in 2016, up 39% compared to \$82 million in 2015. This increase included \$39 million from an acquisition. Excluding the acquisition and a negative foreign currency translation effect of \$1 million, our bookings in Europe were down 8%. Our bookings in Asia were \$65 million in 2016, up 39% compared to 2015, and include a \$4 million decrease from the negative effects of foreign currency translation. Our bookings in Asia in 2015 included a \$16 million booking reversal for a project in China. Weak demand and a relatively soft domestic economy affected most paper grades in China in 2016. That said, we saw a significant increase in project activity in containerboard grades during the fourth quarter of 2016. The most recent RISI forecasts of containerboard demand growth of approximately 2.5% per year for the next few years suggest new capital project activity may remain at moderate levels in China in 2017. Our bookings in the rest of the world decreased 15% to \$29 million in 2016 compared to 2015 and continue to be negatively affected by the recession in Brazil.

We expect to achieve diluted earnings per share (EPS) from continuing operations of \$3.13 to \$3.23 in 2017 on revenue of \$423 to \$433 million. The 2017 guidance includes an unfavorable foreign currency translation effect of \$7 million on revenue and \$0.10 on diluted EPS compared to 2016. For the first quarter of 2017, we expect to achieve diluted EPS from continuing operations of \$0.62 to \$0.66 on revenue of \$97 to \$100 million.

## Results of Operations

## 2016 Compared to 2015

The following table sets forth our consolidated statement of income expressed as a percentage of total revenues:

	2016	2015
Revenues	100%	100%
Costs and Operating Expenses:		
Cost of revenues	54	54
Selling, general, and administrative expenses	33	31

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Research and development expenses	2	2		
Other income and restructuring costs	—	—		
	89	87		
Operating Income	11	13		
Interest Income (Expense), Net	—	—		
Income from Continuing Operations Before Provision for Income Taxes	11	13		
Provision for Income Taxes	3	4		
Income from Continuing Operations	8	% 9	%	

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## Revenues

Revenues for 2016 and 2015 are as follows:

(In thousands)	2016	2015
Revenues:		
Papermaking Systems	\$366,461	\$342,661
Wood Processing Systems	36,850	36,387
Fiber-based Products	10,815	11,059
	\$414,126	\$390,107

Papermaking Systems Segment. Revenues at our Papermaking Systems segment increased \$23.8 million, or 7%, to \$366.5 million in 2016 from \$342.7 million in 2015, including \$40.8 million in revenues from the acquisition of PAAL in April 2016, offset in part by a \$7.1 million decrease from the unfavorable effects of foreign currency translation. Excluding the acquisition and foreign currency translation effect, revenues in our Papermaking Systems segment decreased \$9.9 million, or 3%, primarily due to decreased capital spending by our customers in China and decreased spending by our customers in North America due to general economic uncertainty. These decreases were offset in part by increased demand for both our capital and parts and consumables products at our European operations.

Wood Processing Systems Segment. Revenues at our Wood Processing Systems segment increased \$0.5 million, or 1%, to \$36.9 million in 2016 from \$36.4 million in 2015, including a \$1.3 million decrease from the unfavorable effects of foreign currency translation. Excluding the effects of foreign currency translation, revenues in our Wood Processing Systems segment increased \$1.8 million, or 5%, primarily due to increased demand for our parts and consumables products.

Fiber-based Products. Revenues decreased \$0.3 million, or 2%, to \$10.8 million in 2016 from \$11.1 million in 2015 due to decreased demand for our biodegradable granular products.

Papermaking Systems Segment by Product Line. The following table presents revenues for our Papermaking Systems segment by product line, the changes in revenues by product line between 2016 and 2015, and the changes in revenues by product line between 2016 and 2015 excluding the effect of currency translation. The increase (decrease) in revenues excluding the effect of currency translation represents the increase (decrease) resulting from converting 2016 revenues in local currency into U.S. dollars at 2015 exchange rates, and then comparing this result to actual revenues in 2015. The presentation of the changes in revenues by product line excluding the effect of currency translation is a non-GAAP measure. We believe this non-GAAP measure helps investors gain an understanding of our underlying operations, consistent with how management measures and forecasts our performance, especially when comparing such results to prior periods or forecasts. This non-GAAP measure should not be considered superior to or a substitute for the corresponding generally accepted accounting principles (GAAP) measure.

(In thousands)	2016	2015	Increase (Decrease)	Increase (Decrease) Excluding Effect of Currency Translation
Papermaking Systems Product Lines:				
Stock-Preparation	\$171,378	\$148,341	\$23,037	\$24,631
Doctoring, Cleaning, & Filtration	105,938	101,523	4,415	8,111

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Fluid-Handling	89,145	92,797	(3,652	)	(1,866	)
	\$366,461	\$342,661	\$ 23,800		\$ 30,876	

Revenues from our Stock-Preparation product line increased \$23.0 million, or 16%, in 2016 compared to 2015, including \$40.8 million in revenues from the acquisition of PAAL, offset in part by a \$1.6 million decrease due to the unfavorable effect of foreign currency translation. Excluding the acquisition and unfavorable effect of foreign currency translation, revenues from our Stock-Preparation product line decreased \$16.2 million, or 11%, in 2016 compared to 2015, due to decreased capital spending by our Chinese customers in the first nine months of 2016 and decreased spending by our North American customers due to general economic uncertainty. By comparison, 2015 included robust spending by our customers in North America and China for our stock-preparation products. Revenues from our Doctoring, Cleaning, & Filtration product line increased \$4.4 million, or 4%, in 2016 compared to 2015, including a \$3.7 million decrease from the unfavorable effect of

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foreign currency translation. Excluding the unfavorable effect of foreign currency translation, revenues from our Doctoring, Cleaning, & Filtration product line increased \$8.1 million, or 8%, in 2016 compared to 2015, primarily due to increased demand for our capital products at our Chinese and European operations. Revenues from our Fluid-Handling product line decreased \$3.7 million, or 4%, in 2016 compared to 2015, including a \$1.8 million decrease from the unfavorable effect of foreign currency translation. Excluding the unfavorable effect of foreign currency translation, revenues from our Fluid-Handling product line decreased \$1.9 million, or 2%, in 2016 compared to 2015, primarily due to decreased demand for both our parts and consumables and capital products at our North American operations.

**Gross Profit Margin**

Gross profit margins for 2016 and 2015 are as follows:

Gross Profit Margin:	2016	2015
Papermaking Systems	45.9%	45.9%
Wood Processing Systems	40.9%	47.9%
Fiber-based Products	46.4%	49.5%
	45.5%	46.2%

**Papermaking Systems Segment.** The gross profit margin at the Papermaking Systems segment was 45.9% in both 2016 and 2015. Increases in 2016 primarily due to higher gross profit margins on our capital products were offset by decreases due to the inclusion of lower gross margins from the acquisition of PAAL and a decrease in the proportion of higher-margin parts and consumables revenues.

**Wood Processing Systems Segment.** The gross profit margin at the Wood Processing Systems segment decreased to 40.9% in 2016 from 47.9% in 2015 primarily due to lower gross profit margins on our capital products due to targeted pricing and on our parts and consumables products due to product mix.

**Fiber-based Products.** The gross profit margin decreased to 46.4% in 2016 from 49.5% in 2015 primarily due to decreased manufacturing efficiency related to lower production volumes.

**Operating Expenses**

Selling, general, and administrative (SG&A) expenses increased \$13.0 million, or 11%, to \$135.8 million in 2016 from \$122.8 million in 2015, primarily due to an increase of \$10.7 million from the inclusion of SG&A expenses from the PAAL acquisition and \$1.8 million of acquisition-related expenses. SG&A expenses also increased in 2016 as a result of an additional \$1.0 million of compliance-related costs and \$0.7 million of non-recurring information system conversion costs. These increases were offset in part by a \$2.3 million decrease from the favorable effect of foreign currency translation.

Total stock-based compensation expense was \$5.1 million and \$5.7 million in 2016 and 2015, respectively, and is included in SG&A expenses.

Research and development (R&D) expenses increased \$0.7 million, or 11%, to \$7.4 million in 2016 from \$6.7 million in 2015 and represented 2% of revenues in both periods. The increase in R&D expenses in 2016 primarily related to the inclusion of expenses from the PAAL acquisition.

**Other Income and Restructuring Costs**

Other income and restructuring costs included \$0.3 million of other income and \$0.5 million of restructuring costs in 2016 and 2015, respectively. Other income in 2016 included a pre-tax gain of \$0.3 million related to the sale of real estate in Sweden for cash proceeds of \$0.4 million.

Restructuring costs in 2015 included severance costs of \$0.3 million associated with the reduction of 25 employees in Canada and Brazil related to our 2015 restructuring plans. In addition, restructuring costs in 2015 also included severance costs of \$0.2 million associated with the reduction of four employees in Sweden related to our 2014 restructuring plans. These actions were taken to streamline our operations and all occurred in our Papermaking Systems segment.

**Interest Income**

Interest income increased \$0.1 million, or 35%, to \$0.3 million in 2016 from \$0.2 million in 2015 primarily due to higher average invested balances in 2016.

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Interest Expense

Interest expense increased \$0.4 million, or 36%, to \$1.3 million in 2016 from \$0.9 million in 2015 primarily due to increases in borrowings and capital lease obligations associated with the PAAL acquisition.

Provision for Income Taxes

Our provision for income taxes was \$12.1 million and \$14.8 million in 2016 and 2015, respectively, and represented 27% and 30% of pre-tax income. The effective tax rate of 27% in 2016 was lower than our statutory tax rate primarily due to the distribution of our worldwide earnings and the adoption of ASU No 2016-09 that resulted in a favorable adjustment for the net excess income tax benefits from stock-based compensation arrangements, offset in part by tax expense associated with an increase in nondeductible expenses. The effective tax rate of 30% in 2015 was lower than our statutory tax rate primarily due to the distribution of our worldwide earnings, offset in part by tax expense associated with an increase in nondeductible expenses and state income taxes. We expect our effective tax rate in 2017 to be approximately 27% to 28% compared to 27% in 2016.

Income from Continuing Operations

Income from continuing operations decreased \$2.1 million, or 6%, to \$32.5 million in 2016 from \$34.6 million in 2015, including a decrease in operating income of \$4.5 million, offset in part by a decrease in provision for income taxes of \$2.7 million (see Revenues, Gross Profit Margin, Operating Expenses, and Provision for Income Taxes discussed above).

Recent Accounting Pronouncements

Revenue from Contracts with Customers (Topic 606), Section A-Summary and Amendments That Create Revenue from Contracts with Customers (Topic 606) and Other Assets and Deferred Costs-Contracts with Customers (Subtopic 340-40). In May 2014, the Financial Accounting Standards Board (FASB) issued ASU No. 2014-09, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. The ASU will replace most existing revenue recognition guidance in GAAP when it becomes effective. In March 2016, the FASB issued ASU No. 2016-08, which further clarifies the guidance on the principal versus agent considerations within ASU No. 2014-09. In April 2016, the FASB issued ASU No. 2016-10 to expand the guidance on identifying performance obligations and licensing within ASU 2014-09. In May 2016, the FASB issued ASU No. 2016-11, which rescinds certain previously-issued guidance, including, among other items, guidance relating to accounting for shipping and handling fees and freight services effective upon adoption of ASU No. 2014-09. Also in May 2016, the FASB issued ASU No. 2016-12, which narrowly amended the revenue recognition guidance regarding collectability, noncash consideration, presentation of sales tax and transition. In December 2016, the FASB issued ASU No. 2016-20, which clarifies narrow aspects of Topic 606 and corrects unintended application of the guidance. These new ASUs are effective for us beginning in fiscal 2018. Early adoption is permitted in fiscal 2017. We are continuing to assess the potential effects of these ASUs on our consolidated financial statements, business processes, systems and controls. We are analyzing our current contracts and comparing our current accounting policies and practices pertaining to revenue recognition to those required under the new ASUs to identify potential differences. Our preliminary assessment of our most commonly used customer terms and conditions and routine sales transactions did not identify material impacts to our consolidated financial statements from the application of the guidance; however, a broad assessment is ongoing that includes surveying our major businesses concerning any unique customer contract terms or transactions that could have implications for the timing of revenue recognition under the new guidance. While the assessment process is ongoing, we currently anticipate adopting these ASUs using the modified retrospective transition approach. Under this approach, this guidance would apply to all new contracts initiated in fiscal 2018. For existing contracts that have remaining obligations as of the beginning of fiscal

2018, any difference between the recognition criteria in these ASUs and our current revenue recognition practices would be recognized using a cumulative effect adjustment to the opening balance of retained earnings. We are also in the process of developing and implementing appropriate changes to our business processes, systems and controls to support the recognition criteria and disclosure requirements of these ASUs.

Interest-Imputation of Interest (Subtopic 835-30), Simplifying the Presentation of Debt Issuance Costs. In April 2015, the FASB issued ASU No. 2015-03, which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. In addition, in June 2015, the FASB issued ASU No. 2015-15, which allows an entity to defer the requirements of ASU No. 2015-03 on deferred issuance costs related to line-of-credit arrangements. The recognition and measurement guidance for debt issuance costs are not affected by the amendments in these ASUs. These new disclosure items were effective for us beginning in fiscal 2016. We adopted these ASUs at the beginning of fiscal 2016. Adoption of these ASUs did not have an impact our consolidated financial statements.

Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). In May 2015, the FASB issued ASU No. 2015-07, which removes the requirement to categorize within the fair value hierarchy all

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investments for which fair value is measured using the net asset value per share practical expedient. This ASU also removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. We adopted the disclosure requirements in this guidance at the beginning of fiscal 2016. As this ASU is disclosure-related only, its adoption did not have an effect on our consolidated financial statements.

Inventory (Topic 330), Simplifying the Measurement of Inventory. In July 2015, the FASB issued ASU No. 2015-11, which requires that an entity measure inventory within the scope of this ASU at the lower of cost or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Substantial and unusual losses that result from subsequent measurement of inventory should be disclosed in the financial statements. This new guidance is effective for us beginning in fiscal 2017. We do not expect that adoption of this ASU will have a material effect on our consolidated financial statements.

Business Combinations (Topic 805), Simplifying the Accounting for Measurement-Period Adjustments. In September 2015, the FASB issued ASU No. 2015-16, which requires that an acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. The acquirer is required to record, in the same period's financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. In addition, an entity is required to present, separately on the face of the statement of income or through disclosure in the notes, the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. We adopted this guidance at the beginning of fiscal 2016. Adoption of this ASU did not have an impact our consolidated financial statements.

Leases (Topic 842). In February 2016, the FASB issued ASU No. 2016-02, which requires a lessee to recognize a right-of-use asset and a lease liability for operating leases, initially measured at the present value of the future lease payments, in our balance sheet. This ASU also requires a lessee to recognize a single lease cost, calculated so that the cost of the lease is allocated over the lease term, generally on a straight-line basis. This new guidance is effective for us in fiscal 2019. Early adoption is permitted. As part of the implementation of this new standard, we are in the process of reviewing current accounting policies and assessing the practical expedients allowed under this new guidance. We expect that most of our operating lease commitments will be subject to the new standard and recognized as operating lease liabilities and right-of-use assets upon adoption, which is required using the modified retrospective transition method. We are currently evaluating the other effects that the adoption of this ASU will have on our consolidated financial statements.

Compensation-Stock Compensation (Topic 718), Improvements to Employee Share-Based Payment Accounting. In March 2016, the FASB issued ASU No. 2016-09, which simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification in the statement of cash flows. We early adopted this ASU at the beginning of fiscal 2016. This ASU requires that excess income tax benefits and tax deficiencies related to stock-based compensation arrangements be recognized as discrete items within the provision for income taxes instead of capital in excess of par value in the reporting period in which they occur. As a result of the adoption of this ASU, we recognized an income tax benefit of \$0.6 million, or \$0.05 per diluted share, in our consolidated statement of income in 2016. We prospectively adopted the requirement to classify the excess tax benefits from stock-compensation awards within operating activities in the consolidated statement of cash flows in 2016. Prior period amounts were not restated. We also adopted the guidance in this ASU that requires that taxes paid related to the withholding of common stock upon the vesting of employee stock awards be presented separately within financing activities in the consolidated statement of cash flows. We have retrospectively restated fiscal 2015 and 2014 to reclassify the comparable amount, which was previously presented in

other current liabilities within operating activities. There were no other material effects from adoption of this ASU on our consolidated financial statements.

Financial Instruments-Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments. In June 2016, the FASB issued ASU No. 2016-13, which significantly changes the way entities recognize impairment of many financial assets by requiring immediate recognition of estimated credit losses expected to occur over their remaining lives. This new guidance is effective for us in fiscal 2020. Early adoption is permitted beginning in fiscal 2019. We are currently evaluating the effects that the adoption of this ASU will have on our consolidated financial statements.

Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments. In August 2016, the FASB issued ASU No. 2016-15, which simplifies the diversity in practice related to the presentation and classification of certain cash receipts and cash payments in the statement of cash flows under Topic 230. This ASU addresses the following eight specific cash flow issues: debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance; distributions received from equity method investees; beneficial interests in securitization transactions; and separately identifiable cash flows and application of the predominance principle.

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This new guidance is effective for us in fiscal 2018. Early adoption is permitted. We do not believe that adoption of this ASU will have a material effect on our consolidated financial statements.

Income Taxes (Topic 740), Intra-Entity Transfers of Assets Other Than Inventory. In October 2016, the FASB issued ASU No. 2016-16, which requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs and eliminates the exception for an intra-entity transfer of an asset other than inventory. This new guidance is effective for us in fiscal 2018 with adoption required on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. Early adoption is permitted. We are currently evaluating the effect that the adoption of this ASU will have on our consolidated financial statements.

Statement of Cash Flows (Topic 230), Restricted Cash. In November 2016, the FASB issued ASU No. 2016-18, which requires inclusion of restricted cash and restricted cash equivalents within cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This new guidance is effective for us in fiscal 2018. Early adoption is permitted. We are currently evaluating the effect that the adoption of this ASU will have on our consolidated financial statements.

Business Combinations (Topic 805), Clarifying the Definition of a Business. In January 2017, the FASB issued ASU No. 2017-01, which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The revised definition of a business under ASU 2017-01 will reduce the number of transactions that are accounted for as business combinations. This new guidance is effective on a prospective basis for us in fiscal 2018. Early adoption is allowed for certain transactions. We are currently evaluating the effects that the adoption of this ASU will have on our consolidated financial statements.

Accounting Changes and Error Corrections (Topic 250) and Investments - Equity Method and Joint Ventures (Topic 323), Amendments to SEC Paragraphs Pursuant to Staff Announcements at the September 22, 2016 and November 17, 2016 EITF Meetings. In January 2017, the FASB issued ASU No. 2017-03 that provides amendments that add paragraph 250-10-S99-6 which includes the text of "SEC Staff Announcement: Disclosure of the Impact That Recently Issued Accounting Standards Will Have on the Financial Statements of a Registrant When Such Standards Are Adopted in a Future Period (in accordance with Staff Accounting Bulletin (SAB) Topic 11.M). This announcement applies to ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606); ASU No. 2016-02, Leases (Topic 842); and ASU 2016-03, Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments; and subsequent amendments. Therefore, we have enhanced our disclosures regarding the impact that these recently issued accounting standards to be adopted in future periods will have on our accounting and disclosures in this summary of recent accounting policies.

Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment. In January 2017, the FASB issued ASU No. 2017-04, which eliminates Step 2 in goodwill impairment testing, which requires that goodwill impairment losses be measured as the difference between the implied value of a reporting unit's goodwill and its carrying amount. This ASU will reduce the cost and complexity of impairment testing by requiring goodwill impairment losses to be measured as the excess of the reporting unit's carrying amount, including goodwill and related goodwill tax effects, over its fair value. This new guidance is effective on a prospective basis for us in fiscal 2020. Early adoption is permitted. We do not believe that adoption of this ASU will have a material effect on our consolidated financial statements.

## 2015 Compared to 2014

The following table sets forth our consolidated statement of income expressed as a percentage of total revenues:

	2015	2014
Revenues	100%	100%
Costs and Operating Expenses:		

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Cost of revenues	54	56
Selling, general, and administrative expenses	31	32
Research and development expenses	2	2
Restructuring costs	—	—
	87	90
Operating Income	13	10
Interest Income (Expense), Net	—	—
Income from Continuing Operations Before Provision for Income Taxes	13	10
Provision for Income Taxes	4	3
Income from Continuing Operations	9	% 7 %

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## Revenues

Revenues for 2015 and 2014 are as follows:

(In thousands)	2015	2014
Revenues:		
Papermaking Systems	\$342,661	\$348,199
Wood Processing Systems	36,387	41,647
Fiber-based Products	11,059	12,281
	\$390,107	\$402,127

Papermaking Systems Segment. Revenues at our Papermaking Systems segment decreased \$5.5 million, or 2%, to \$342.7 million in 2015 from \$348.2 million in 2014, including a \$26.4 million decrease from the unfavorable effects of foreign currency exchange. Excluding the effects of foreign currency exchange, revenues in our Papermaking Systems segment increased \$20.9 million primarily due to increased demand for our parts and consumables products, especially in our Stock-Preparation product line, and the inclusion of \$6.7 million in revenue from an acquisition made in 2014.

Wood Processing Systems Segment. Revenues at our Wood Processing Systems segment decreased \$5.2 million, or 13%, to \$36.4 million in 2015 from \$41.6 million in 2014, including a \$5.8 million decrease from the unfavorable effects of foreign currency exchange. Excluding the effects of foreign currency translation, revenues in our Wood Processing Systems segment increased \$0.6 million, or 1%, primarily due to increased demand for our parts and consumables products.

Fiber-based Products. Revenues decreased \$1.2 million, or 10%, to \$11.1 million in 2015 from \$12.3 million in 2014 due to decreased demand for our biodegradable granular products.

Papermaking Systems Segment by Product Line. The following table presents revenues for our Papermaking Systems segment by product line, the changes in revenues by product line between 2015 and 2014, and the changes in revenues by product line between 2015 and 2014 excluding the effect of currency translation. The increase (decrease) in revenues excluding the effect of currency translation represents the increase (decrease) resulting from converting 2015 revenues in local currency into U.S. dollars at 2014 exchange rates, and then comparing this result to actual revenues in 2014. The presentation of the changes in revenues by product line excluding the effect of currency translation is a non-GAAP measure. We believe this non-GAAP measure helps investors gain an understanding of our underlying operations, consistent with how management measures and forecasts our performance, especially when comparing such results to prior periods or forecasts. This non-GAAP measure should not be considered superior to or a substitute for the corresponding GAAP measure.

(In thousands)	2015	2014	Increase (Decrease)
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