UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
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 October 31, 2019 or
☐ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _________ to _________.

Commission File No. 0-9143

HURCO COMPANIES, INC.

(Exact name of registrant as specified in its charter)

Indiana	**35-1150732**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
One Technology Way **Indianapolis, Indiana**	**46268**
(Address of principal executive offices)	(Zip code)

Registrant's telephone number, including area code **(317) 293-5309**

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, no par value	HURC	Nasdaq Global Select Market

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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☒ No ☐

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

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

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

The aggregate market value of the registrant's voting stock held by non-affiliates as of April 30, 2019 (the last business day of our most recently completed second quarter) was $266,155,000.

The number of shares of the registrant's common stock outstanding as of December 31, 2019 was 6,770,233.

DOCUMENTS INCORPORATED BY REFERENCE: Portions of the registrant's Proxy Statement for its 2020 Annual Meeting of Shareholders (Part III).

Forward-Looking Statements

This report contains certain statements that are forward-looking statements within the meaning of federal securities laws. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts. When used in this report, the words “may”, “will”, “should”, “would” ,“could”, “anticipate”, “expect”, “plan”, “seek”, “believe”, “predict”, “estimate”, “potential”, “project”, “target”, “forecast”, “intend”, “strategy”, “future”, “opportunity”, “assume”, “guide”, and similar expressions are intended to identify forward-looking statements. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties that could cause actual results to differ materially from such forward-looking statements. These risks and uncertainties include, but are not limited to, the cyclical nature of the machine tool industry, changes in general economic and business conditions that affect demand for our products, the risks of our international operations, changes in manufacturing markets, innovations by competitors, the ability to protect our intellectual property, governmental actions and initiatives including import and export restrictions and tariffs, breaches of our network and system security measures, fluctuations in foreign currency exchange rates, increases in prices of raw materials, quality and delivery performance by our vendors, our ability to effectively integrate acquisitions, negative or unforeseen tax consequences, and the risks and other important factors under the heading “Risk Factors” in Part I, Item 1A of this report. You should understand that it is not possible to predict or identify all factors that could cause actual results to differ materially from forward-looking statements. Consequently, you should not consider any list or discussion of such factors to be a complete set of all potential risks or uncertainties. Readers of this report are cautioned not to place undue reliance on these forward-looking statements. While we believe the assumptions on which the forward-looking statements are based are reasonable, there can be no assurance that these forward-looking statements will prove to be accurate. This cautionary statement is applicable to all forward-looking statements contained in this report. We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our Form 10-Q, 8-K and 10-K reports and our other filings with the Securities and Exchange Commission (“SEC”).

PART I

Item 1. BUSINESS

General

Hurco Companies, Inc. is an international, industrial technology company. We design, manufacture and sell computerized (i.e., Computer Numeric Control (“CNC”)) machine tools, consisting primarily of vertical machining centers (mills) and turning centers (lathes), to companies in the metal cutting industry through a worldwide sales, service and distribution network. Although the majority of our computer control systems and software products are proprietary, they predominantly use industry standard personal computer components. Our computer control systems and software products are primarily sold as integral components of our computerized machine tool products. We also provide machine tool components, automation integration equipment and solutions for job shops, software options, control upgrades, accessories and replacement parts for our products, as well as customer service and training and applications support. As used in this report, the words “we”, “us”, “our”, “Hurco” and the “Company” refer to Hurco Companies, Inc. and its consolidated subsidiaries.

Since our founding in 1968, we have been a leader in the introduction of interactive computer control systems that automate manufacturing processes and improve productivity in the metal parts manufacturing industry. We pioneered the application of microprocessor technology and conversational programming software for use in machine tools. Our Hurco brand computer control systems can be operated by both skilled and unskilled machine tool operators and, yet, are capable of instructing a machine to perform complex tasks. The combination of microprocessor technology and patented interactive, conversational programming software in our proprietary computer control systems enables operators on the production floor to quickly and easily create a program for machining a particular part from a blueprint or computer aided design file and immediately begin machining that part.

Our executive offices and principal design and engineering operations are headquartered in Indianapolis, Indiana, U.S. Sales, application engineering and service subsidiaries are located in China, France, Germany, India, Italy, Poland, Singapore, Taiwan, the United Kingdom, and the U.S. We have manufacturing and assembly operations in Taiwan, the U.S., Italy and China, and distribution facilities in the U.S., the Netherlands, and Taiwan.

Our strategy is to design, manufacture and sell a comprehensive line of computerized machine tools that help customers in the worldwide metal cutting market increase productivity and profitability. The majority of our machine tools employ proprietary, interactive computer control technology that increases productivity through ease of operation via interactive conversational and graphical programming software. All of our machine tools, regardless of brand, deliver high levels of machine performance (speed, accuracy and surface finish quality) that increases productivity. We routinely expand our product offerings to meet customer needs, which has led us to design and manufacture more complex machining centers with advanced capabilities. We bring a disciplined approach to strategically enter new geographic markets, as appropriate.

In the last six years, we have implemented a strategic plan to expand our market reach to more customers with more products on a global basis. While the Hurco-branded computer control systems have been, and continue to be, our premium flagship product line, we have added other products to our portfolio that provide product diversity and market penetration opportunity, while minimizing the impact of geographic cyclicality, with products priced from entry-level to high performance serving a variety of different industries. We have not changed our overall strategy to design, manufacture and sell a comprehensive line of computerized machine tools; rather, we have enhanced this strategy through growth both organically and through acquisitions to ensure long-term stability and overall profitability.

Industry

Machine tool products are considered capital goods, which makes them part of an industry that has historically been highly cyclical.

Industry association data for the U.S. machine tool market is available, and that market accounts for approximately 13% of worldwide consumption. Reports available for the U.S. machine tool market include:

- United States Machine Tool Consumption – generated by the Association for Manufacturing Technology, this report includes metal cutting machines of all types and sizes, including segments in which we do not compete;
- Purchasing Manager’s Index – developed by the Institute for Supply Management, this report includes activity levels in U.S. manufacturing plants that purchase machine tools; and
- Capacity Utilization of Manufacturing Companies – issued by the Federal Reserve Board.

A limited amount of information is available for foreign markets, and different reporting methodologies are used by various countries. Machine tool consumption data, published by Gardner Publications, Inc., calculates machine tool consumption annually by country. It is important to note that data for foreign countries are based on government reports that may lag 6 to 12 months behind real-time and, therefore, are unreliable for forecasting purposes.

Demand for capital equipment can fluctuate significantly during periods of changing economic conditions. Manufacturers and suppliers of capital goods, such as our company, are often the first to experience these changes in demand. Additionally, since our typical order backlog is approximately 45 days, it is difficult to estimate demand with any reasonable certainty. Therefore, we do not have the benefit of relying on the common leading indicators that other industries use for market analysis and forecasting purposes.

Products

Our core products consist of general-purpose, computerized machine tools for the metal cutting industry, principally, vertical machining centers (mills) and turning centers (lathes). The majority of our machine tools are equipped and integrated fully with our proprietary software and computer control systems, while the remaining machine tools are equipped with industry standard controls. Additionally, we produce and distribute software options, control upgrades, hardware accessories and replacement parts for our machine tool product lines, and we provide operator training and support services to our customers. We also produce computer control systems and related software for press brake applications that are sold as retrofit units for installation on existing or new press brake machines. In addition, we own an automation integration company that specializes in job shop automation.

The following table sets forth the contribution of each of our product groups and services to our total revenues during each of the past three fiscal years (in thousands):

Net Sales and Service Fees by Product Category

	Year Ended October 31,					
	2019		2018		2017	
Computerized Machine Tools	$ 223,735	85%	$ 261,710	87%	$ 209,311	86%
Computer Control Systems and Software †	2,818	1%	2,870	1%	2,324	1%
Service Parts	27,854	11%	27,501	9%	24,255	10%
Service Fees	8,970	3%	8,590	3%	7,777	3%
Total	$ 263,377	100%	$ 300,671	100%	$ 243,667	100%

† Amounts shown do not include computer control systems and software sold as an integrated component of computerized machine systems.

Product Portfolio by Brand

We have three brands of CNC machine tools in our product portfolio: Hurco is the technology innovation brand for customers who want to increase productivity and profitability by selecting a brand with the latest software and motion technology. Milltronics is the value-based brand for shops that want easy-to-use machines at competitive prices. The Takumi brand is for customers that need very high speed, high efficiency performance, such as that required in the production, die and mold, aerospace and medical industries. Takumi machines are equipped with industry standard controls instead of the proprietary controls found on Hurco and Milltronics machines. ProCobots, LLC (“ProCobots”) is our wholly-owned subsidiary that provides automation solutions that can be integrated with any machine tool. In addition, through our wholly-owned subsidiary LCM Precision Technology S.r.l. (“LCM”), we produce high-value machine tool components and accessories. The main product categories of each brand are outlined below.

The Hurco, Milltronics and Takumi product lines represent a comprehensive product portfolio with more than 150 different models. The combined machine tool product lines also provide benefits related to the development of product enhancements, technologies and models due to leverage of shared resources and cross-utilization of proven engineering designs that allow us to achieve manufacturing cost reductions from economies of scale and manufacturing efficiencies.

Hurco CNC Machine Tools

Hurco computerized machine tools are equipped with a fully integrated interactive computer control system that features our proprietary WinMax® software. Our computer control system enables a machine tool operator to create complex two-dimensional ("2D") or three-dimensional ("3D") machining programs directly from an engineering drawing or computer-aided design geometry file such as solid model. An operator with little or no machine tool programming experience can successfully create a program with minimal training and begin machining the part in a short period of time. The control features an operator console with active touch, and incorporates an upgradeable personal computer (PC) platform using a high-speed processor with solid rendering graphical programming. In addition, WinMax® has a Windows®† based operating system that enables users to improve shop floor flexibility and software productivity. Companies using computer-controlled machine tools are better able to:

- maximize the efficiency of their human resources;
- make more advanced and complex parts from a wide range of materials using multiple processes;
- incorporate fast moving changes in technology into their operations to keep their competitive edge; and
- integrate their business into the global supply chain of their customers by supporting small to medium lot sizes for "just in time" initiatives.

Our Windows® based Hurco control facilitates our ability to meet these customer needs. The familiar Windows® operating system coupled with our intuitive conversational style of program creation allows our customers' operators to create and edit part-making programs without incurring the incremental overhead of specialized computer aided design and computer aided manufacturing programmers. With the ability to transfer most computer aided design data directly into a Hurco program, programming time can be significantly reduced.

Machine tool products today are being designed to meet the demand for machining complex parts with greater part accuracies. Our proprietary controls with WinMax® software and high-speed processors efficiently handle the large amounts of data these complex part-making programs require, which enable our customers to create parts with higher accuracy at faster speeds. We continue to add technology to our control design as it becomes available. UltiMotion, our patented motion control system, provides significant cycle time reductions and increases the quality of a part's surface finish. This technology differentiates us in the marketplace and is incorporated into our control.

Our offering of Hurco machining centers, currently equipped with either a dual touch-screen console or a single touch-screen console, consists of the following product lines:

HTM/HTL Product Line

The HTM/HTL product line includes a tool room mill and tool room lathe. These models are designed for easy access to the table (mill) or chuck (lathe) and are popular in tool room, prototype and maintenance applications. There is a 30-inch X-travel mill and an 8-inch chuck lathe.

VM Product Line

The VM product line consists of moderately priced vertical machining centers for the entry-level market, while still offering the advantage of our advanced control and motion systems. The design premise of the machining center with a large work cube and a small footprint optimizes the use of available floor space. The VM line consists of five models in four sizes with X-axis (horizontal) travels of 18, 26, 40, and 50 inches.

VMX Product Line

The VMX product line is our flagship series of machining centers and consists of higher performing vertical machining centers aimed at manufacturers that require faster speeds and greater part accuracy. The small and medium size models are available with either belted or inline (direct) spindles and the larger models are offered as either #40 or #50 taper. The VMX line consists of 12 models in eight sizes with X-axis travels of 24, 26, 30, 42, 50, 60, 64, and 84 inches.

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†Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

U Series Product Line

This product line features five-axis trunnion tables integrated onto familiar C-frame style machines, making an easy entry into five-axis for first time users. U Series models are offered with 8, 10, 14 and 20-inch diameter rotary tables with both standard and high-speed spindles.

SRT/SW Product Line

The SRT Series of five-axis machines utilizes a swivel head and a C-axis rotary table embedded into and flush with the machine table, making them among the most flexible machines in the industry. The SW model utilizes the swivel head and a traditional machine table that can be then fitted with an A-axis rotary to machine long five-axis parts. These models are available in either 42 or 60-inch X-axis travels.

VC/VCX Product Line

The B-axis configuration of the VC/VCX Series provides greater undercut capability in both positive and negative directions, allowing users to access more part surface area for machining. These cantilever models are available in a 20-inch pallet moderately-priced model as well as a high speed, high performance model with a torque motor-driven 23.6-inch diameter rotary table.

HS Product Line

Due to the integral, motorized spindle with a base speed of 18,000 rpm, the HS product line is desirable for the die and mold industry because of that industry’s particular interest in the improvement of surface finish quality and the reduction of cycle time. Additionally, this product line offers us the opportunity to expand our customer base to manufacturers that produce larger batches. The HS product line consists of four models with X-axis travels of 24, 30, 42, and 60 inches.

BX Product Line

The BX product line is for customers that require higher accuracy parts, as they are built with an extremely rigid double column design that offers superior vibration dampening and excellent thermal characteristics. Four models are available, two with 40-inch X-travels (a three-axis version and a five-axis version), as well as 53-inch and 63-inch X-travel models.

HM Product Line

The HM product line offers customers moderately priced horizontal machining centers designed for small lot sizes. Two models are available, one with a rotary table and one with a plain table. They both have X-travels of 67 inches. These products are designed for high mix, low volume applications that benefit from a horizontal spindle configuration but don’t require an expensive pallet switching system typically found on competitive horizontal machines.

HBMX Product Line

The HBMX product line is beneficial to manufacturers that build custom machinery and parts for a multitude of industries, such as packaging, pharmaceutical, automotive, energy, and medical. Additionally, boring mills are also used to repair and/or rebuild large components. The HBMX boring mill product line consists of four models with X-axis travels of 55, 79, 94, and 120 inches.

TM/TMM Product Line

The TM/TMM product line of slant-bed lathes (horizontal turning centers) is designed for entry-level job shops and contract manufacturers seeking efficient processing of small to medium lot sizes. There is one TM model in seven sizes, measured by chuck size: the TM6i, TM8i, TM10i, TM12i, TM18i, TM18Li, and TM18BBi. We added motorized tooling on the lathe turret to further enhance the capability of the TM turning centers and designated it as the TMM product line. These turning centers with live tooling allow our customers to complete a number of secondary milling, drilling and tapping operations while the part is still held in the chuck after the turning operations are complete, which provides significant productivity gains. The TMM product line consists of three models: TMM8i, TMM10i, and TMM12i.

TMX Product Line

The TMX product line consists of high-performance turning centers. There are six models in two sizes. The TMX-MY models are equipped with an additional axis and motorized live tooling while the TMX-MYS models also have an additional spindle. These products are designed for customers who want to reduce part handling and complete complex components that require speed, accuracy and superior surface finish in a single set-up.

DCX Product Line

The double column DCX series includes five models in three sizes. These 2-meter, 3-meter, and 4-meter machining centers are designed to facilitate production of large parts and molds often required by the aerospace, energy and custom machinery industries. They are the largest models offered by Hurco that feature the powerful and flexible WinMax® control.

Product Development

Since Hurco is the technology innovation brand of our corporate portfolio, we have focused our attention on product enhancements of existing models in an effort to align the Hurco brand with the newest engineering innovations and components available to compete with other premium brands in the marketplace. Examples of product enhancements completed in 2019 include the use of linear cross roller guideways, faster and more powerful motors, higher spindle speeds, and design refinements, such as new column designs and sheet metal enclosures to support our high standards for quality and reliability.

Milltronics CNC Machine Tools

Our Milltronics line of CNC machine tools is designed for excellent value with more standard features for the price versus market leaders. We manufacture and sell these machine tools with fully integrated interactive computer control systems that are also compatible with G & M Code programs (generated from CAD/CAM software) and conversational visual aid programming. These straightforward and easy-to-use control systems are available in two versions, the Series 8200-B for our CNC VK knee mills and the more advanced Series 9000 DGI offered on all other models.

The Milltronics portfolio consists of the following product lines:

VK Series

The VK is Milltronics' CNC knee mill designed for prototype, R&D, maintenance and other general-purpose applications. It offers the easy table access of a conventional knee mill, with the power and flexibility of the Milltronics 8200-B CNC control and motion system. Unlike most competitive models, it is not a retrofit kit but rather designed from the ground up as a CNC.

MB/RH Product Line

Products with the MM/MB or RH designation are part of the tool room bed mill category, which are machines that do not have an enclosure, also referred to as open bed machines. Typical applications on these machines include general machining, job shops, prototype or maintenance and repair. Available with quill-head or rigid-head designs, there are six models in four sizes with X-axis travels of 30, 40, 60 and 78 inches. These easy-to-use machines feature the Series 9000 DGI control.

VM General Purpose (GP) Product Line

The VM-GP product line consists of attractively-priced vertical machining centers designed for job shops, prototype, research and development and other general machining applications. These belt-driven models are 40-taper and available in four different sizes – all with the Series 9000 DGI control. Customers can choose models with X-axis (horizontal) travels of 25, 30, 40 or 50 inches. There is also a model with extended spindle nose-to-table dimensions for large fourth-axis rotary applications.

VM Inline Performance (IL) Product Line

The VM-IL product line consists of moderately-priced performance vertical machining centers for high-speed applications such as tool, die and mold, aerospace or medical machining. Featuring heavier castings, faster motion and inline spindles, these 40-taper machines include the Series 9000 DGI control and are available in four sizes. Models include X-axis travels of 30, 42, 50 or 60 inches.

VM Extra Power (XP) Product Line

The VM-XP product line consists of moderately-priced vertical machining centers for more demanding metal removal applications such as castings or forgings. These heavy-duty 50-taper models are designed for applications that require more power and torque and feature the Series 9000 DGI control. Customers can choose from three different models with X-axis travels of 50, 60 or 84 inches.

BR Product Line

The BR product line consists of high-speed bridge mills that are used in pattern shops and the aerospace industry, in addition to job shops, due to the large table and travels that support a wide range of part sizes. BR machines have inline spindles and are available as six models in three sizes with X-axis travels of 100, 150 and 200 inches. BR machines offer the Series 9000 DGI control.

SL Product Line

The SL product line of slant-bed lathes (horizontal turning centers) is designed for entry-level job shops and contract manufacturers seeking efficient processing of small to medium lot sizes. There are three models with chuck sizes of 6, 8 and 10 inches. These compact machines feature the Series 9000 DGI control.

ML Product Line

The ML product line consists of combination lathes that the customer can configure for either tool room or production applications with the option to add live tooling. There are 17 models available in a variety of thru hole sizes and in the following six swing-over bed diameters: 17, 19, 23, 27, 36 and 39.7 inches. These flexible machines feature the Series 9000 DGI control.

New Products

In fiscal 2019, Milltronics introduced the TRM 3016, a new value priced, enclosed tool room CNC. The machine features unique “drop down” side access doors that allow the accommodation of longer parts. The TRM is equipped with the Series 9000 DGI control. Also, in 2019, we introduced a new extra-large Milltronics XP model called the VM8434XP. This machine has 84 inches of X-axis travel, with a heavy duty #50-taper spindle, making it suitable for large, difficult to machine parts and materials.

Takumi CNC Machine Tools

The Takumi brand features machines designed for high speed, high efficiency milling. This includes key market segments such as die and mold, aerospace, medical and energy or any customer that needs to produce very high accuracy parts quickly. Takumi machines are available with a variety of industry standard CNC controls, including Fanuc®*, Siemens®, Mitsubishi® or Heidenhain®. Models include three-axis vertical machining centers with linear guides; three-axis vertical machining centers with box ways; high-speed, double column vertical machining centers; and heavy duty, double column and five-axis machining centers. Takumi machines are hand built and fitted to exacting standards to produce high accuracies and surface finishes.

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*Fanuc® is a registered trademark of GE Fanuc Automation Americas, Inc. Siemens® is a registered trademark of Siemens AG. Mitsubishi® is a registered trademark of Mitsubishi Electric Corporation. Heidenhain® is a registered trademark of HEIDENHAIN CORPORATION, a wholly-owned subsidiary of the German company DR. JOHANNES HEIDENHAIN GmbH.

The Takumi portfolio consists of the following product lines:

VC Series

The VC Series vertical machining centers are fast, three-axis linear guide machining centers designed for customers doing a variety of different parts, including die and mold, medical, automotive and other work.

The VC machines are available in four sizes with X-axis travels of 34, 42 and 50 inches. An extended Y-axis travel version of the 42-inch model is offered for mold shops making square mold bases.

V Series

The V Series vertical machining centers are heavy-duty, box way machines built for tough applications such as roughing cast iron. These three-axis, massive machines feature belt or geared spindles to provide maximum torque. The V Series product line includes eight models with X-axis travels of 39, 43, 47, 60, 70, 78, 86, and 126 inches.

H Series

Designed to produce parts that require high precision and superior surface finishes, H Series machines offer an extremely rigid and thermally-stable double column design. These three-axis models feature high-speed direct drive or built-in HSK spindles with up to 20,000 rpm and offer a 24,000 rpm spindle and 36,000 rpm spindle as options. The H Series product line consists of eight models in seven different sizes with X-axis travels of 30, 35, 40, 53, 63, 86, and 126 inches. These machines are targeted especially for die and mold customers as well as aerospace companies.

U Series

Designed with trunnion tables and swivel heads, these five-axis simultaneous machining centers offer versatility, as well as save setup and process time. Most models are offered with double column structure for superior stability and performance. The U-Series product line consists of six models, four of which offer trunnion table sizes of 10, 16, 24 and 31.5 inches. One additional model, the UB, is equipped with a B/C swivel head and an HSK100, 12,000 rpm built-in spindle. The UB’s double column design provides a spacious X-axis travel of 126 inches. A new model called the UR1000 has a two-axis head and a 39-inch rotary table integrated into a double column machine, designed for large and heavy five-axis parts such as those found in die and mold, aerospace and energy applications.

G Series

Designed specifically for the machining of graphite or copper electrodes used in electrical discharge machining (EDM), G Series machines offer the same extremely rigid and thermally stable double column design of the H Series, featuring high-speed direct drive or built-in HSK spindles with up to 20,000 rpm. The G Series product line consists of two models with X-axis travels of 30 and 40 inches.

BC Series

The BC Series machine is a double column three-axis machining center designed for heavy cutting and applications that require high power and torque, such as die and mold. This model includes a 6,000 rpm geared-head design with X-axis travels of 82 inches.

SL Lathes

SL slant-bed lathes are turning centers equipped with box ways and designed for heavy cutting to provide superior part finishes. The SL Series includes three models: the SL200, SL250, and SL300.

New Products

In 2019, Takumi introduced a small, high-speed double column model called the H6 aimed at the electronics and medical markets. Featuring a 30,000 rpm spindle, the machine is capable of producing very high accuracy small components quickly and with exceptional surface finishes. Takumi also introduced the UR1000, a large capacity five-axis machine with a two-axis head and integrated 39-inch rotary table, suitable for large and heavy parts.

Other Control Systems, Software and Accessories

The following machine tool computer control systems and software products are sold directly to end-users and/or to other original equipment manufacturers ("OEM").

Autobend®

Our Autobend® computer control systems are applied to metal bending press brake machines that form parts from sheet metal and steel plate. They consist of a microprocessor-based computer control and back gauge (an automated gauging system that determines where the bend will be made). We have manufactured and sold the Autobend® product line since 1968. We currently market two models of our Autobend® computer control systems for press brake machines, in combination with six different back gauges as retrofit units for installation on existing or new press brake machines.

Software Products

In addition to our standard computer control features, we offer software option products for part programming. These products are sold to users of our Hurco computerized machine tools equipped with our dual touch-screen or single touch-screen consoles featuring WinMax® control software. Each international division packages the options as appropriate for its market. The most common options include: Advanced Verification Graphics, Swept Surface, DXF Transfer, 3D DXF and Solid Model Import, UltiMonitor, UltiPocket with Helical Ramp Entry and Insert Pockets, Conversational Part and Tool Probing, Tool and Material Library, NC/Conversational Merge, Job List, Stream Load, Linear Thermal Compensation, Thread Repair, and Simultaneous Five-Axis Contouring.

The Advanced Verification Graphics option displays a picture of the rendered part on the screen of the control that can be viewed from any angle. The detail allows the customer to evaluate how the part is programmed to be machined before cutting commences, which eliminates the need to scrap expensive material.

Solid Model Import with 3D DXF Technology allows the operator to import a solid model directly into the control and provides integrated CAD/CAM and tool path simulation.

Our Swept Surface software option simplifies programming of 3D contours and significantly reduces programming time.

The DXF Transfer software option increases operator productivity because it eliminates manual data entry of part features by transferring AutoCAD®* drawing files directly into our computer control or into our desktop programming software, WinMax® Desktop.

3D DXF and Solid Model Import automatically uses geometry from a 3D CAD model to easily create conversational programs for 2D and 3D parts or even 3+2 and 5-sided parts.

Designed to take advantage of the Internet of Things ("IoT"), UltiMonitor is a web-based productivity, management and service tool that enables customers to monitor, inspect and receive notifications about their Hurco machines from any location where they can access the internet. Customers can transfer part designs, receive event notifications via email or text, access diagnostic data, monitor the machine via webcam and communicate with the machine operator.

UltiPocket with Helical Ramp Entry and Insert Pockets automatically calculates the tool path around islands, eliminating the arduous task of plotting these shapes. Islands can also be rotated, scaled and repeated.

Conversational Part and Tool Probing options permit the computerized dimensional measurement of machined parts and the associated cutting tools. This "on-machine" technique improves the throughput of the measurement process when compared to traditional "off-machine" approaches.

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* AutoCAD® is a registered trademark of Autodesk, Inc., and/or its subsidiaries/ affiliates in the U.S. and/or other countries.

The Tool and Material Library option stores the tool and material information with the machine instead of storing it with each individual part program. The user enters the tool data and geometry one time and chooses the particular tool from the list when it is needed. Additionally, the library reads the part program and automatically locates the tool or displays an alert if the tool does not exist. In addition to saving time, the Tool and Material Library eliminates the need to enter information repeatedly and can prevent common tool crash conditions.

NC/Conversational Merge lets the user incorporate conversational features, such as tool probing, pattern operations, and scaling into existing G-Code programs.

Job List provides an intuitive way to group files together and run them sequentially without operator intervention, which promotes automation, lights-out machining, program stitching, file bundling, and adaptive processes.

Stream Load allows the user to run very large NC files without the need to upload the entire file into the control's memory to avoid exceeding memory limits.

Linear Thermal Compensation is a feature that allows the user to specify corrections to compensate for the effects of thermal growth in high speed machining applications.

Thread Repair is a feature for turning applications that provides an efficient way to repair existing threads, which is especially beneficial for large pipes and other parts manufactured for the oil/energy sector.

Simultaneous Five-Axis Contouring software enables a five-axis machine to command motion concurrently on all axes. This allows the user to create continuous tool-paths along complex geometries with only a single machine/part setup, providing increased productivity along with the performance benefits of using shorter cutting tools. The sale of simultaneous five-axis contouring software is subject to government export licensing requirements.

ProCobots CNC Automation

Located in the greater Pittsburgh, Pennsylvania area, ProCobots provides automation solutions that can be integrated with any machine tool. ProCobots integrations include robots, grippers, material handling and Industry 4.0-capable software and controls. Designed to be easy to use, safe and flexible, ProCobots solutions are standardized systems aimed at high-mix, low volume customers. Products include portable models such as ER5 and Profeeder Light, as well as flexible cell solutions, including the Profeeder and Profeeder Q.

Non-Hurco Branded Products & Technologies

While our three brands of CNC machine tools are responsible for the vast majority of our revenue, we have added other products to the lineup that have contributed to our top and bottom line growth and will provide product diversity, market penetration opportunity, while minimizing the impact of geographic cyclicality, with products priced from entry-level to high performance serving a variety of different industries. We believe these non-Hurco branded products help us partially offset the cyclical nature of the machine tool market by diversifying our product offering. These non-Hurco branded products are comprised primarily of other general-purpose vertical machining centers and lathes, laser cutting machines, waterjet cutting machines, CNC grinders, compact horizontal machining centers, metal cutting saws and CNC swiss lathes.

LCM Machine Tool Components and Accessories

Based in Italy, LCM designs, manufactures and sells mechanical and electro-mechanical components and accessories for machine tools for a wide variety of machine tool OEMs. LCM's direct drive spindle, swivel head, and rotary torque table are used in our SRT line of five-axis machining centers to achieve simultaneous five-axis machining.

CNC Rotary Tables

LCM has five lines of CNC rotary tables for both horizontal and vertical-horizontal positioning. Customers can choose rotary tables with either hydraulic or pneumatic clamping systems. Additionally, LCM offers CNC rotary tables powered by either a torque motor or a high-precision mechanical transmission.

CNC Tilt Tables

LCM has seven lines of CNC tilting rotary tables, of which four lines are intended specifically for five-axis machining centers. Each of the seven lines is differentiated by the technology used for clamping (hydraulic or pneumatic) and by the type of transmission (either mechanical transmission or torque motor).

Swivel Heads and Electro-spindles

LCM has two primary lines of swivel heads that enable the spindle axis to be tilted with continuous motion and one line of electro-spindles (built-in motors for swivel heads). The two lines of swivel heads are differentiated by the type of transmission (either mechanical transmission or torque motor).

Parts and Service

Our service organization provides installation, warranty, operator training and customer support for our products on a worldwide basis. In the United States, our principal distributors generally have the primary responsibility for machine installation and warranty service and support for product sales. Our service organization also sells software options, computer control upgrades, accessories and replacement parts for our products. We believe our after-sales parts and service business strengthens our customer relationships and provides continuous information concerning the evolving requirements of end-users.

Manufacturing

Our computerized metal cutting machine tools are manufactured and assembled to our specifications primarily by our wholly-owned subsidiaries in Taiwan (Hurco Manufacturing Limited (“HML”)) and Waconia, Minnesota (Milltronics USA, Inc. (“Milltronics”)). HML and Milltronics conduct final assembly operations and are supported by a network of contract suppliers of components and sub-assemblies that manufacture components for our products. Our facility in Ningbo, China (Ningbo Hurco Machine Tool Co. Ltd (“NHML”)), focuses on the machining of castings to support HML’s production in Taiwan. The LCM line of electro-mechanical components and accessories for machine tools is designed and manufactured in Italy. Our facility in Indianapolis, Indiana, also conducts final assembly operations for certain Hurco VMX machines for the American market and manufactures certain electro-spindle components for LCM.

We have a contract manufacturing agreement for computer control systems with Hurco Automation, Ltd. (“HAL”), a Taiwanese company in which we have a 35% ownership interest. This company produces all of our computer control systems to our specifications, sources industry standard computer components and our proprietary parts, performs final assembly and conducts test operations.

We work closely with our subsidiaries, key component suppliers and HAL to ensure that their production capacity will be sufficient to meet the projected demand for our machine tool products. Many of the key components used in our machines can be sourced from multiple suppliers. However, any prolonged interruption of operations or significant reduction in the capacity or performance capability at any of our manufacturing facilities, or at any of our key component suppliers, could have a material adverse effect on our operations.

Marketing and Distribution

We principally sell our products through more than 190 independent agents and distributors throughout North and South America (the "Americas"), Europe and Asia. Although some distributors carry competitive products, we are the primary line for the majority of our distributors globally. We also have our own direct sales and service organizations in China, France, Germany, India, Italy, Poland, Singapore, Taiwan, the United Kingdom and certain parts of the United States, which are among the world's principal machine tool consuming markets.

Approximately 87% of the worldwide demand for computerized machine tools and computer control systems is outside of the U.S. In fiscal 2019, approximately 64% of our revenues were derived from customers outside of the U.S., which include customers located in Canada, Mexico and Central and South America. No single end-user or distributor of our products accounted for more than 5% of our total sales and service fees. The end-users of our products are precision tool, die and mold manufacturers, independent job shops, specialized short-run production applications within large manufacturing operations and manufacturing facilities that focus on medium to high run production wherein they run large batches of a few types of parts instead of small batches of many different parts. Industries served include aerospace, defense, medical equipment, energy, automotive/ transportation, electronics and computer industries.

We also sell our Autobend® computer control systems to OEMs of new metal fabrication machine tools that integrate them with their own products prior to the sale of those products to their own customers, to retrofitters of used metal fabrication machine tools that integrate them with those machines as part of the retrofitting operation, and to end-users that have an installed base of metal fabrication machine tools, either with or without related computer control systems.

Demand

We believe demand for our products is driven by advances in industrial technology and the related demand for automated process improvements. Other factors affecting demand include:

- the need to continuously improve productivity and shorten cycle time;
- an aging machine tool installed base that will require replacement with more advanced technology;
- the industrial development of emerging markets in Latin America, Asia and Eastern Europe; and
- the declining supply of skilled machinists.

Demand for our products is also highly dependent upon economic conditions and the general level of business confidence, as well as such factors as production capacity utilization and changes in governmental policies regarding tariffs, corporate taxation, fluctuations in foreign currencies, and other investment incentives.

Competition

We compete with many other machine tool producers in the United States and foreign countries. Most of our competitors are larger and have greater financial resources than our company. Major worldwide competitors include DMG Mori Seiki Co., Ltd., Mazak, Haas Automation, Inc., Doosan, Okuma Machinery Works Ltd, Hyundai and Feeler.

Through our subsidiary LCM, we compete with manufacturers of machine tool components and accessories such as IBAG, Kessler, Peron Speed, GSA Technology Co., LTD and Duplomatic Automation.

We strive to compete by developing patentable software and other proprietary features that offer enhanced productivity, technological capabilities and ease of use. We offer our products in a range of prices and capabilities to target a broad potential market. We also believe that our competitiveness is aided by our reputation for reliability and quality, our strong international sales and distribution organization, and our extensive customer service organization.

Intellectual Property

We consider the majority of our products to be proprietary. Various features of our Hurco and Milltronics control systems and machine tools employ technologies covered by patents and trademarks that are material to our business. We also own additional patents covering new technologies that we have acquired or developed, and that we are planning to incorporate into our control systems or products in the future.

Employees

We had approximately 785 full-time employees at the end of fiscal 2019, none of whom are covered by a collective-bargaining agreement. We have experienced no employee-generated work stoppages or disruptions, and we consider our employee relations to be satisfactory.

Backlog

For information on orders and backlog, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Availability of Reports and Other Information

Our website can be found at www.hurco.com. We use this website as a means of disclosing pertinent information about the Company, free of charge, including:

- Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, proxy materials, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file that material with or furnish it to the SEC;
- Press releases on quarterly earnings, product announcements, legal developments and other material news that we may post from time to time;
- Corporate governance information including our Corporate Governance Principles, Code of Business Conduct and Ethics, information concerning our Board of Directors and its committees, including the charters of the Audit Committee, Compensation Committee, Nominating and Governance Committee and other governance-related policies; and
- Opportunities to sign up for email alerts and RSS feeds to have information provided in real time.

The information available on our website is not incorporated by reference in, or a part of, this or any other report we file with, or furnish to, the SEC.

Item 1A. RISK FACTORS

In this section, we describe what we believe to be the material risks related to our business. The risks and uncertainties described below or elsewhere in this report are not the only ones to which we are exposed. Additional risks and uncertainties not presently known and/or risks we currently deem immaterial may also adversely affect our business and operations. If any of the developments included in the following risks were to occur, our business, financial condition, results of operations, cash flows or prospects could be materially adversely affected.

The cyclical nature of our business causes fluctuations in our operating results.

The machine tool industry is highly cyclical and changes in demand can occur abruptly in the geographic markets we serve. As a result of this cyclicality, we have experienced significant fluctuations in our sales, which, in periods of reduced demand, have adversely affected our results of operations and financial condition, which could re-occur in the future.

Uncertain global economic conditions may adversely affect overall demand.

We typically sell the majority of our larger, high-performance VMX machines in Europe, which makes us particularly sensitive to economic and market conditions in that region. Economic uncertainty and business downturns in the U.S., European and Asian Pacific markets adversely affect our results of operations and financial condition.

Our international operations pose additional risks that may adversely impact sales and earnings.

During fiscal 2019, approximately 64% of our revenues were derived from sales to customers located outside of the U.S., which include customers located in Canada, Mexico and Central and South America. In addition, our main manufacturing facilities are located outside of the U.S. Our international operations are subject to a number of risks, including:

- trade barriers;
- regional economic uncertainty;
- differing labor regulation;
- governmental expropriation;
- domestic and foreign customs and tariffs;
- current and changing regulatory environments affecting the importation and exportation of products and raw materials;
- difficulty in obtaining distribution support;
- difficulty in staffing and managing widespread operations;
- differences in the availability and terms of financing;
- political instability and unrest;
- negative or unforeseen consequences resulting from the introduction, termination, modification, or renegotiation of international trade agreements or treaties or the imposition of countervailing measures or anti-dumping duties or similar tariffs;
- foreign exchange controls that make it difficult to repatriate earnings and cash;
- changes in tax regulations and rates in foreign countries; and
- changes in the European Union and Asia may adversely affect business activity and economic conditions globally and could continue to contribute to instability in global financial and foreign exchange markets, as well as disrupt the free movement of goods, services and people between countries.

Quotas, tariffs, taxes or other trade barriers could require us to attempt to change manufacturing sources, reduce prices, increase spending on marketing or product development, withdraw from or not enter certain markets or otherwise take actions that could be adverse to us and/or that we might not be able to accomplish in a timely manner or at all. Also, in some foreign jurisdictions, we may be subject to laws limiting the right and ability of entities organized or operating therein to pay dividends or remit earnings to affiliated companies unless specified conditions are met. These factors may adversely affect our future operating results. The vast majority of our products are shipped from our manufacturing facility in Taiwan from the Port of Taichung to four ports of destination: Los Angeles, California; Tacoma, Washington; Venlo, the Netherlands; and Shanghai, China. Changes in customs requirements, as a result of national security or other constraints put upon these ports, may also have an adverse impact on our results of operations.

Additionally, we must comply with complex foreign and U.S. laws and regulations in a multitude of jurisdictions, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, other foreign laws prohibiting corrupt payments to governmental officials, and anti-competition regulations. Violations of these laws and regulations could result in fines and penalties, criminal sanctions, tariffs or duties, restrictions on our business conduct and on our ability to offer our products in one or more countries, and could also materially adversely affect our brand, our ability to attract and retain employees, our international operations, our business and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

Disruptions in our manufacturing operations or the supply of materials and components could adversely affect our business, results of operations and financial condition.

We depend on our wholly-owned subsidiaries, HML, NHML, Milltronics, and LCM, to produce our machine tools and electro-mechanical components and accessories in Taiwan, China, the U.S. and Italy, respectively. We also depend on our 35% owned affiliate, HAL, and other key third-party suppliers to produce our computer control systems and key components, such as motors and drives for our machine tools. An unplanned interruption in manufacturing or supply, or significant increase in price from third party suppliers, would have a material adverse effect on our business, results of operations and financial condition. Such an interruption or increase in price could result from various factors, including a change in the political environment, such as trade wars or tariffs, a natural disaster, such as an earthquake, typhoon, or tsunami, or vulnerabilities in our technology or cyber-attacks against our information systems, such as ransomware attacks. Also, any interruption in service by one of our key component suppliers, if prolonged, could have a material adverse effect on our business, results of operations and financial condition.

Fluctuations in the exchange rates between the U.S. Dollar and any of several foreign currencies can increase our costs and decrease our revenues.

Our sales to customers located outside of the Americas, which generated approximately 63% of our revenues in fiscal 2019, are invoiced and received in several foreign currencies, primarily the Euro, Pound Sterling and Chinese Yuan. Therefore, our results of operations and financial condition are affected by fluctuations in exchange rates between these currencies and the U.S. Dollar, both for purposes of actual conversion and for financial reporting purposes. In addition, we are exposed to exchange risk associated with our purchases of materials and components for our Taiwan manufacturing operations, which are primarily made in the New Taiwan Dollar and the Euro. We hedge a portion of our foreign currency exposure with the purchase of forward exchange contracts. These hedge contracts only mitigate the impact of changes in foreign currency exchange rates that occur during the term of the related contract period and carry risks of counterparty failure. There can be no assurance that our hedges will have their intended effects.

Our competitive position and prospects for growth may be diminished if we are unable to develop and introduce new and enhanced products on a timely basis that are accepted in the market.

The machine tool industry is subject to technological change, evolving industry standards, changing customer requirements, and improvements in and expansion of product offerings. Our ability to anticipate changes in technology, industry standards, customers' requirements and competitors' product offerings and to develop and introduce new and enhanced products on a timely basis that are accepted in the market, are significant factors in maintaining and improving our competitive position and growth prospects, and we may not be able to accomplish those actions on a timely basis or at all. If the technologies or standards used in our products become obsolete or fail to gain widespread commercial acceptance, our business would be materially adversely affected. Developments by others may render our products or technologies obsolete or noncompetitive.

We compete with larger companies that have greater financial resources, and our business could be harmed by competitors' actions.

The markets in which our products are sold are extremely competitive and highly fragmented. In marketing our products, we compete with other manufacturers in terms of quality, reliability, price, value, delivery time, service and technological characteristics. We compete with a number of U.S., European and Asian competitors, most of which are larger and have substantially greater financial resources and some of which have been supported by governmental or financial institution subsidies and, therefore, may have competitive advantages over us. Our financial resources are limited compared to those of most of our competitors, making it challenging to remain competitive.

Fluctuations in the price of raw materials, especially steel and iron, could adversely affect our sales, costs and profitability.

We manufacture products with a high iron and steel content. The availability and price for these and other raw materials are subject to volatility due to worldwide supply and demand forces, speculative actions, inventory levels, exchange rates, production costs, anticipated or perceived shortages and tariffs or other trade restrictions. In some cases, those cost increases can be passed on to customers in the form of price increases; in other cases, they cannot. If the prices of raw materials increase and we are not able to charge our customers higher prices to compensate, our results of operations would be adversely affected.

Regulations related to "conflict minerals" may cause us to incur additional expenses and could limit the supply and increase the cost of certain metals used in manufacturing our products.

The SEC requires disclosure by public companies of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured. Securities laws and/or SEC rules require a disclosure report to be filed annually with the SEC and require companies to perform due diligence and to disclose and report whether or not such minerals originate from the Democratic Republic of Congo or an adjoining country. Such laws or rules could affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of components that are incorporated into our products, including tin, tantalum, gold and tungsten. The number of suppliers that provide conflict-free minerals may be limited. In addition, there may be material costs associated with complying with the disclosure requirements, such as costs related to the due diligence process of determining the source of certain minerals used in our products, as well as costs of possible changes to products, processes, or sources of supply as a consequence of such verification activities. We may not be able to sufficiently verify the origins of the relevant minerals used in components manufactured by third parties through our due diligence procedures, which may harm our reputation. We may also encounter challenges to satisfy those customers that require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so.

Due to future changes in technology, changes in market demand, or changes in market expectations, portions of our inventory may become obsolete or excessive.

The technology within our products evolves, and we periodically bring new versions of our machines to market. The phasing out of an old product involves estimating the amount of inventory required to satisfy the final demand for those machines and to satisfy future repair part needs. Based on changing customer demand and expectations of delivery times for repair parts, we may find that we have either obsolete or excess inventory on hand. Because of unforeseen future changes in technology, market demand or competition, we might have to write off unusable inventory, which would adversely affect our results of operations.

Acquisitions could disrupt our operations and harm our operating results.

We may seek additional opportunities to expand our product offerings or the markets we serve by acquiring other companies, product lines, technologies and personnel. Acquisitions involve numerous risks, including the following:

- difficulties integrating the operations, technologies, products, and personnel of an acquired company or being subjected to liability for the target's pre-acquisition activities or operations as a successor in interest;
- diversion of management's attention from normal daily operations of the business;
- potential difficulties completing projects associated with in-process research and development;
- difficulties entering markets in which we have no or limited prior experience, especially when competitors in such markets have stronger market positions;
- initial dependence on unfamiliar supply chains or relatively small supply partners;
- insufficient revenues to offset increased expenses associated with acquisitions;
- the potential loss of key employees of the acquired companies; and
- the potential for recording goodwill and intangible assets that later can be subject to impairment.

Acquisitions may also cause us to:

- issue common stock that would dilute our current shareholders' percentage ownership;
- assume or otherwise be subject to liabilities of an acquired company;
- record goodwill and non-amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges;
- incur amortization expenses related to certain intangible assets;
- incur large acquisition and integration costs, immediate write-offs, and restructuring and other related expenses; and
- become subject to litigation.

Mergers and acquisitions are inherently risky. No assurance can be given that our acquisitions will be successful. Further, no assurance can be given that an acquisition will not adversely affect our business, operating results, or financial condition. Failure to manage and successfully integrate an acquisition could harm our business and operating results in a material way. Even when an acquired company has already developed and marketed products, there can be no assurance that enhancements to those products will be made in a timely manner or that pre-acquisition due diligence will identify all possible issues that might arise with respect to such products or the acquired business.

Risks related to new product development also apply to acquisitions. For additional information, please see the risk factor above entitled, "Due to future changes in technology, changes in market demand, or changes in market expectations, portions of our inventory may become obsolete or excessive."

Assets may become impaired, requiring us to record a significant charge to earnings.

We review our assets, including intangible assets such as goodwill, for indications of impairment annually and when events or changes in circumstances indicate the carrying value may not be recoverable. We could be required to record a significant charge to earnings in our financial statements for the period in which any impairment of these assets is determined, which would adversely affect our results of operations for that period.

We may experience negative or unforeseen tax consequences.

We may experience negative or unforeseen tax consequences, which could materially adversely affect our results of operations. We review the probability of the realization of our net deferred tax assets each period based on forecasts of taxable income in both the U.S. and foreign jurisdictions. This review uses historical results, projected future operating results based upon approved business plans, eligible carryforward periods, tax-planning opportunities and other relevant considerations. Adverse changes in our profitability and financial outlook in the U.S. or foreign jurisdictions may require the creation of a valuation allowance to reduce our net deferred tax assets. Such changes could result in material non-cash expenses in the period in which the changes are made and could have a material adverse impact on our results of operations and financial condition. We also earn a significant amount of our operating income from outside the U.S., and any repatriation of funds representing earnings of foreign subsidiaries may significantly impact our effective tax rates.

We are subject to taxes in the U.S. and numerous foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions, including the U.S., may be subject to significant change. Our effective tax rates could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation, including tax laws in the U.S. Similarly, changes in tax laws or regulations, including those in the U.S., could negatively impact our effective tax rate and results of operations. A change in a statutory tax rate may result in the revaluation of our deferred tax assets and liabilities related to the relevant jurisdiction in which the new tax law is enacted, potentially resulting in a material expense or benefit recorded in our Consolidated Statements of Income for that period.

In December 2017, the U.S. passed the Tax Cuts and Jobs Act. The Company has evaluated and recorded the aggregate impact of this passed legislation on our financial condition, cash flows and results of operations. Any benefits associated with lower U.S. corporate tax rates could be reduced or outweighed by other tax changes adverse to our business or operations, such as new or additional taxes imposed on earnings and/or reinvested earnings of our foreign subsidiaries. The aggregate impact of such legislation, including adverse future regulatory guidance, could have a material adverse impact on our cash flows and results of operations.

Other changes in the tax laws of the jurisdictions where we do business, including an increase in tax rates or an adverse change in the treatment of an item of income or expense, could result in a material increase in our tax expense. For example, changes in the tax laws of foreign jurisdictions could arise as a result of the “base erosion and profit shifting” project undertaken by the Organisation for Economic Co-operation and Development (“OECD”). The OECD, which represents a coalition of member countries, has recommended changes to numerous long-standing tax principles. These changes, as adopted by countries, could increase tax uncertainty and may adversely affect our provision for income taxes.

Our continued success depends on our ability to protect our intellectual property.

Our future success depends, in part, upon our ability to protect our intellectual property. We rely principally on nondisclosure agreements, other contractual arrangements, trade secret law, trademark registration and patents to protect our intellectual property. However, these measures may be inadequate to protect our intellectual property from infringement by others or prevent misappropriation of our proprietary rights. In addition, the laws of some foreign countries do not protect proprietary rights to the same extent as do U.S. laws. Our inability to protect our proprietary information and enforce our intellectual property rights through infringement proceedings could have a material adverse effect on our business, financial condition and results of operations.

We are also subject to claims that we may be infringing certain patent or other intellectual property rights of third parties. While it is not possible to predict the outcome of patent and other intellectual property litigation, such litigation could result in our payment of significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, reduce the market value of our products and services, lower our profits, and could otherwise have an adverse effect on our business, financial condition and results of operations.

The unanticipated loss of current members of our senior management team and other key personnel may adversely affect our operating results.

The unexpected loss of members of our senior management team or other key personnel could impair our ability to carry out our business plan. We believe that our future success will depend, in part, on our ability to attract and retain highly skilled and qualified personnel. The loss of senior management or other key personnel may adversely affect our operating results as we incur costs to replace the departed personnel and potentially lose opportunities in the transition of important job functions.

Failure to comply with data privacy and security laws and regulations could adversely affect our operating results and business.

A number of U.S. states have enacted data privacy and security laws and regulations that govern the collection, use, disclosure, transfer, storage, disposal, and protection of sensitive personal information, such as social security numbers, financial information and other personal information. For example, several U.S. territories and all 50 states now have data breach laws that require timely notification to individual victims, and at times regulators, if a company has experienced the unauthorized access or acquisition of sensitive personal data. Other state laws include the California Consumer Privacy Act ("CCPA"), which was signed into law on June 28, 2018 and largely took effect on January 1, 2020. The CCPA, among other things, contains new disclosure obligations for businesses that collect personal information about California residents and affords those individuals new rights relating to their personal information that may affect our ability to use personal information or share it with our business partners. Regulations from the California Attorney General have not been finalized, and it is expected that additional amendments to the CCPA will be introduced in 2020. Meanwhile, over fifteen other states have considered privacy laws like the CCPA, We will continue to monitor and assess the impact of these state laws, which may impose substantial penalties for violations, impose significant costs for investigations and compliance, allow private class-action litigation and carry significant potential liability for our business.

Outside of the U.S., data protection laws, including the EU General Data Protection Regulation (the "GDPR"), also apply to some of our operations. Legal requirements in these countries relating to the collection, storage, processing and transfer of personal data continue to evolve. The GDPR imposes, among other things, data protection requirements that include strict obligations and restrictions on the ability to collect, analyze and transfer EU personal data, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances, and possible substantial fines for any violations (including possible fines for certain violations of up to the greater of 20 million Euros or 4% of total company revenue). Other governmental authorities around the world are considering similar types of legislative and regulatory proposals concerning data protection.

The interpretation and enforcement of the laws and regulations described above are uncertain and subject to change, and may require substantial costs to monitor and implement compliance with any additional requirements. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include substantial civil and/or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business.

If our network and system security measures are breached and unauthorized access is obtained to our data, to our employees', customers' or vendors' data, or to our critical information technology systems, we may incur legal and financial exposure and liabilities.

As part of our business, we store our data and certain data about our employees, customers and vendors in our information technology systems. If a third party gained unauthorized access to our data, including any data regarding our employees, customers or vendors, the security breach could expose us to risks, including loss of business, litigation and possible liability. Our security measures may be breached as a result of third-party action, including intentional misconduct by computer hackers, employee error, malfeasance or otherwise. Third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as usernames, passwords or other information to gain access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. In addition, given their size and complexity, our information systems could be vulnerable to service interruptions or to security breaches from inadvertent or intentional actions by our employees, third-party vendors and/or business partners, or from cyber-attacks by malicious third parties attempting to gain unauthorized access to our products, systems or confidential information.

Like other public, multi-national corporations, we have and/or will continue to be subject to, instances of phishing attacks on our email systems, other cyber-attacks, including state-sponsored cyber-attacks, industrial espionage, insider threats, computer denial-of-service attacks, computer viruses, ransomware and other malware, wire fraud or other cyber incidents.

Although we work closely with industry recognized manufacturers supporting the security measures we have employed in an effort to keep our technology current with the ongoing threats, the techniques used to obtain unauthorized access, or to sabotage systems, are becoming more sophisticated, frequent and adaptive, and therefore we may be unable to anticipate these techniques or to implement adequate preventative measures. Any security breach could result in: the unauthorized publication of our confidential business or proprietary information; the unauthorized release of employee, customer or vendor data and payment information; a loss of confidence by our customers; damage to our reputation; a disruption to our business; litigation and legal liability; and a negative impact on our future sales. In addition, the cost and operational consequences of implementing further data protection or data restoration measures could be significant.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The following table sets forth the principal use, location, and size of each of our facilities:

Principal Uses	Locations	Square Footage
Corporate headquarters, design and engineering, product testing, sales and marketing, application engineering, customer service, manufacturing and assembly	Indianapolis, Indiana, U.S.	165,000
Manufacturing, assembly, sales, application engineering and customer service	Taichung, Taiwan	452,100
	Waconia, Minnesota, U.S.	59,500
	Castell'Alfero, Italy	32,300
Manufacturing	Ningbo, China	31,000
Sales, application engineering, customer service, and warehousing	High Wycombe, England	26,300
	Benoni, South Africa*	3,500
	Paris, France	12,800
	Munich and Verl, Germany	22,400
	Milan, Italy	12,900
	Venlo, the Netherlands	9,700
	Toh Guan, Singapore	3,900
	Shanghai, Dongguan, Kunshan, China	12,200
	Chennai, Delhi, and Pune India	10,200
	Liegnitz, Poland	1,000
	Grand Rapids, Michigan, U.S.	3,700
	Los Angeles, California, U.S.	11,400
	Pittsburg, Pennsylvania, U.S.	13,000

We own the Indianapolis facility and lease all other facilities. The leases have terms expiring at various dates ranging from January 2020 to December 2029. We believe that all of our facilities are well maintained and are adequate for our needs now and in the foreseeable future. We do not believe that we would experience significant difficulty in replacing any of the present facilities if any of our leases were not renewed at expiration.

* The lease for our South Africa facility will expire in January 2020.

Item 3. LEGAL PROCEEDINGS

From time to time, we are involved in various claims and lawsuits arising in the normal course of business. Pursuant to applicable accounting rules, we accrue the minimum liability for each known claim when the estimated outcome is a range of possible loss and no one amount within that range is more likely than another. We maintain insurance policies for such matters, and we record insurance recoveries when we determine such recovery to be probable. We do not expect any of these claims, individually or in the aggregate, to have a material adverse effect on our consolidated financial position or results of operations. We believe that the ultimate resolution of claims for any losses will not exceed our insurance policy coverages.

Item 4. MINE SAFETY DISCLOSURES

None.

Information about our Executive Officers

Executive officers are appointed each year by the Board of Directors following the Annual Meeting of Shareholders to serve during the ensuing year and until their respective successors are elected and qualified. There are no family relationships between any of our executive officers or between any of them and any of the members of the Board of Directors.

The following information sets forth as of October 31, 2019, the name of each executive officer and his or her age, tenure as an officer, principal occupation and business experience:

Name	Age	Position(s) with the Company
Michael Doar	64	Chairman of the Board and Chief Executive Officer
Gregory S. Volovic	55	Director, President and Chief Operating Officer
Sonja K. McClelland	48	Executive Vice President, Secretary, Treasurer and Chief Financial Officer

Michael Doar was elected Chairman of the Board and Chief Executive Officer on November 14, 2001. Mr. Doar had held various management positions with Ingersoll Milling Machine Company from 1989 until 2001. Mr. Doar has been a director of Hurco since 2000.

Gregory S. Volovic has been employed by us since March 2005. He was elected as our President in March 2013 and elected and appointed as a director and our Chief Operating Officer, respectively, in March 2019. Mr. Volovic held various positions within our company most recently Executive Vice President, Software and Engineering before becoming President in 2013. Prior to joining us, Mr. Volovic held various positions with Thomson, Inc. including Director of E-Business, Engineering, and Information Technology. Prior to that, Mr. Volovic was employed by Unisys Corporation.

Sonja K. McClelland has been employed by us since September 1996 and was elected as Vice President, Secretary, Treasurer and Chief Financial Officer in March 2014 and then Executive Vice President in March 2017. Ms. McClelland served as our Corporate Accounting Manager from September 1996 to 1999, as Division Controller for Hurco USA from September 1999 to November 2004, and as our Corporate Controller and Assistant Secretary from November 2004 to March 2014. Prior to joining us, Ms. McClelland was employed by an international public accounting firm.

PART II

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

Market Information

Our common stock is traded on the Nasdaq Global Select Market under the symbol “HURC”.

Holders

There were 110 holders of record of our common stock as of December 13, 2019.

Dividend Policy

We began declaring cash dividends on our common stock in the third quarter of fiscal 2013, and we expect to continue to declare dividends on a quarterly basis; however, the declaration and amount of any future cash dividends will be subject to the sole discretion of our Board of Directors and will depend upon many factors, including our results of operations, financial condition, capital requirements, regulatory and contractual restrictions, our business strategy and other factors deemed relevant by our Board of Directors from time to time.

Our payment of dividends is limited by our U.S. credit agreement, as further described in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and in Note 5 of Notes to Consolidated Financial Statements.

Other Information

During the period covered by this report, we did not sell any equity securities that were not registered under the Securities Act of 1933, as amended.

The disclosure under the caption “Equity Compensation Plan Information at 2019 Fiscal Year End” in our 2020 proxy statement is incorporated by reference in Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The performance graph information is included in Item 9B. Other Information.

Item 6. SELECTED FINANCIAL DATA

The Selected Financial Data presented below has been derived from our consolidated financial statements for the years indicated and should be read in conjunction with the consolidated financial statements and related notes set forth elsewhere herein and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	Year Ended October 31,				
	2019	2018	2017	2016	2015
	(In thousands, except per share amounts)				
Statement of Operations Data:					
Sales and service fees	$ 263,377	$ 300,671	$ 243,667	$ 227,289	$ 219,383
Gross profit	77,208	91,806	70,564	70,440	69,091
Selling, general and administrative expenses	54,668	58,010	49,661	50,824	45,287
Operating income	22,540	33,796	20,903	19,616	23,804
Other income (expense)	784	(1,300)	(187)	(731)	(251)
Net income	17,495	21,490	15,115	13,292	16,214
Earnings per common share - diluted	$ 2.55	$ 3.15	$ 2.25	$ 1.99	$ 2.44
Weighted average common shares outstanding-diluted	6,815	6,771	6,680	6,642	6,602
Dividends declared per common share	$ 0.47	$ 0.43	$ 0.39	$ 0.35	$ 0.31

	As of October 31,				
	2019	2018	2017	2016	2015
	(Dollars in thousands)				
Balance Sheet Data:					
Current assets	$ 261,861	$ 281,435	$ 246,415	$ 218,381	$ 216,112
Current liabilities	54,632	86,803	70,889	57,968	65,086
Working capital	207,229	194,632	175,526	160,413	151,026
Current ratio	4.8	3.2	3.5	3.8	3.3
Total assets	301,065	315,407	277,808	251,949	248,577
Non-current liabilities	6,188	5,751	3,834	8,506	8,923
Total debt	--	1,434	1,507	1,476	1,583
Shareholders' equity	240,245	222,853	203,085	185,475	174,568

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

EXECUTIVE OVERVIEW

Hurco Companies, Inc. is an international, industrial technology company operating in a single segment. We design, manufacture and sell computerized (i.e., CNC) machine tools, consisting primarily of vertical machining centers (mills) and turning centers (lathes), to companies in the metal cutting industry through a worldwide sales, service and distribution network. Although the majority of our computer control systems and software products are proprietary, they predominantly use industry standard personal computer components. Our computer control systems and software products are primarily sold as integral components of our computerized machine tool products. We also provide machine tool components, automation integration equipment and solutions for job shops, software options, control upgrades, accessories and replacement parts for our products, as well as customer service and training and applications support.

The following overview is intended to provide a brief explanation of the principal factors that have contributed to our recent financial performance. This overview is intended to be read in conjunction with the more detailed information included in our financial statements that appear elsewhere in this report.

The market for machine tools is international in scope. We have both significant foreign sales and significant foreign manufacturing operations. During fiscal 2019, approximately 51% of our revenues were attributable to customers in Europe, where we typically sell more of our higher-performance, higher-priced VMX series machines. Additionally, approximately 12% of our revenues were attributable to customers in the Asia Pacific region, where we encounter greater price pressures.

We have three brands of CNC machine tools in our product portfolio: Hurco is the technology innovation brand for customers who want to increase productivity and profitability by selecting a brand with the latest software and motion technology. Milltronics is the value-based brand for shops that want easy-to-use machines at competitive prices. The Takumi brand is for customers that need very high speed, high efficiency performance, such as that required in the production, die/mold, aerospace and medical industries. Takumi machines are equipped with industry standard controls instead of the proprietary controls found on Hurco and Milltronics machines. ProCobots is our wholly-owned subsidiary that provides automation solutions that can be integrated with any machine tool. In addition, through our wholly-owned subsidiary LCM, we produce high value machine tool components and accessories.

We principally sell our products through more than 190 independent agents and distributors throughout the Americas, Europe and Asia. Although some distributors carry competitive products, we are the primary line for the majority of our distributors globally. We also have our own direct sales and service organizations in China, France, Germany, India, Italy, Poland, Singapore, Taiwan, the United Kingdom and certain parts of the United States, which are among the world's principal machine tool consuming markets. The vast majority of our machine tools are manufactured to our specifications primarily by our wholly-owned subsidiary in Taiwan, HML. Machine castings to support HML’s production are manufactured at our wholly-owned subsidiary in Ningbo, China, NHML. Components to support our SRT line of five-axis machining centers, such as the direct drive spindle, swivel head and rotary table, are manufactured by our wholly-owned subsidiary in Italy, LCM.

Our sales to foreign customers are denominated, and payments by those customers are made, in the prevailing currencies in the countries in which those customers are located (primarily the Euro, Pound Sterling and Chinese Yuan). Our product costs are incurred and paid primarily in the New Taiwan Dollar and the U.S. Dollar. Changes in currency exchange rates may have a material effect on our operating results and consolidated financial statements as reported under U.S. Generally Accepted Accounting Principles. For example, when the U.S. Dollar weakens in value relative to a foreign currency, sales made, and expenses incurred, in that currency when translated to U.S. Dollars for reporting in our financial statements, are higher than would be the case when the U.S. Dollar is stronger. In the comparison of our period-to-period results, we discuss the effect of currency translation on those results, which reflect translation to U.S. Dollars at exchange rates prevailing during the period covered by those financial statements.

Our high levels of foreign manufacturing and sales also expose us to cash flow risks due to fluctuating currency exchange rates. We seek to mitigate those risks through the use of derivative instruments – principally foreign currency forward exchange contracts.

Results of Operations

The following table presents, for the fiscal years indicated, selected items from the Consolidated Statements of Income expressed as a percentage of our worldwide sales and service fees and the year-to-year percentage changes in the dollar amounts of those items.

	Percentage of Revenues			Year-to-Year % Change Increase/Decrease	
	2019	2018	2017	’19 vs. ’18	’18 vs. ’17
Sales and service fees	100%	100%	100%	-12%	23%
Gross profit	29%	31%	29%	-16%	30%
Selling, general and administrative expenses	21%	19%	20%	-6%	17%
Operating income	9%	11%	9%	-33%	62%
Net income	7%	7%	6%	-19%	42%

Fiscal 2019 Compared to Fiscal 2018

Sales and Service Fees. Sales and service fees for fiscal 2019 were $263.4 million, a decrease of $37.3 million, or 12%, compared to fiscal 2018, and included an unfavorable currency impact of $8.5 million, or 3%, when translating foreign sales to U.S. Dollars for financial reporting purposes.

Net Sales and Service Fees by Geographic Region

The following table sets forth net sales and service fees by geographic region for the fiscal years ended October 31, 2019 and 2018 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2019		2018		Amount	%
Americas	$ 99,064	37%	$ 90,902	30%	$ 8,162	9%
Europe	133,675	51%	166,202	55%	(32,527)	-20%
Asia Pacific	30,638	12%	43,567	15%	(12,929)	-30%
Total	$ 263,377	100%	$ 300,671	100%	$ (37,294)	-12%

Sales in the Americas for fiscal 2019 increased by 9%, compared to fiscal 2018, primarily attributable to sales of vertical milling machines from a U.S. machine tool distributor in California acquired by Hurco in the fourth quarter of fiscal 2018. European sales for fiscal 2019 decreased by 20%, compared to fiscal 2018, and included an unfavorable currency impact of 4%, when translating foreign sales to U.S. Dollars for financial reporting purposes. The decrease in European sales for fiscal 2019 was primarily attributable to a reduced volume of shipments of Hurco machines in Germany and the United Kingdom, as well as a decrease in sales of electro-mechanical components and accessories manufactured by our wholly-owned subsidiary in Italy, LCM. Asian Pacific sales for fiscal 2019 decreased by 30%, compared to fiscal 2018, and included an unfavorable currency impact of 2%, when translating foreign sales to U.S. Dollars for financial reporting purposes. The decrease in Asian Pacific sales for fiscal 2019 was primarily attributable to decreased shipments of Hurco vertical milling machines and Takumi bridge mill machines in China, partially offset by increased shipments of Hurco vertical milling machines in India.

Net Sales and Service Fees by Product Category

The following table sets forth net sales and service fees by product group and services for the fiscal years ended October 31, 2019 and 2018 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2019		2018		Amount	%
Computerized Machine Tools	$ 223,735	85%	$ 261,710	87%	$ (37,975)	-15%
Computer Control Systems and Software †	2,818	1%	2,870	1%	(52)	-2%
Service Parts	27,854	11%	27,501	9%	353	1%
Service Fees	8,970	3%	8,590	3%	380	4%
Total	$ 263,377	100%	$ 300,671	100%	$ (37,294)	-12%

† Amounts shown do not include computer control systems and software sold as an integrated component of computerized machine systems.

Sales of computerized machine tools and computer control systems and software for fiscal 2019 decreased by 15% and 2%, respectively, and each included an unfavorable currency impact of 3%, compared to fiscal 2018. The year-over-year decrease in sales of computerized machine tools and computer control systems and software were mainly due to decreased sales of Hurco and Takumi machines in Germany, the United Kingdom and China, as well as a decrease in sales of electro-mechanical components and accessories manufactured by LCM, partially offset by an increase in sales of vertical milling machines from the U.S. machine tool distributor in California acquired by Hurco in the fourth quarter of fiscal 2018. Sales of service parts and service fees for fiscal 2019 increased by 1% and 4%, respectively, compared to fiscal 2018, due primarily to an increase in aftermarket sales and aftermarket service of Hurco products in North America.

Orders and Backlog. Orders for fiscal 2019 were $241.1 million, a decrease of $64.7 million, or 21%, compared to fiscal 2018, and included an unfavorable currency impact of $8.5 million, or 3%, when translating foreign orders to U.S. Dollars.

The following table sets forth new orders booked by geographic region for the fiscal years ended October 31, 2019 and 2018 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2019		2018		Amount	%
Americas	$ 89,136	37%	$ 94,160	31%	$ (5,024)	-5%
Europe	120,191	50%	170,366	56%	(50,175)	-29%
Asia Pacific	31,779	13%	41,319	13%	(9,540)	-23%
Total	$ 241,106	100%	$ 305,845	100%	$ (64,739)	-21%

Orders in the Americas for fiscal 2019 decreased by 5%, compared to fiscal 2018, primarily due to the fact that fiscal 2018 reflected orders resulting from year-end promotional activities following the September 2018 International Manufacturing Technology Show (“IMTS”), which is held every two years. The decrease in orders for fiscal 2019, compared to fiscal 2018, was partially offset by increased customer demand for vertical milling machines from the distributor in California acquired in the fourth quarter of fiscal 2018 and increased customer demand for automation and integration systems from ProCobots, a U.S.-based automation integration company acquired by Hurco in the fourth quarter of fiscal 2019. European orders for fiscal 2019 decreased by 29%, compared to fiscal 2018, and included an unfavorable currency impact of 4%, when translating foreign orders to U.S. Dollars. The year-over-year decrease in orders was driven primarily by decreased customer demand for Hurco and Takumi machines in Germany and Italy, as well as a decrease in customer demand for electro-mechanical components and accessories manufactured by LCM. Asian Pacific orders for fiscal 2019 decreased by 23%, compared to fiscal 2018, and included an unfavorable currency impact of 3%, when translating foreign orders to U.S. Dollars, due mainly to decreased customer demand for Hurco and Takumi machines in China and India.

Backlog at October 31, 2019 decreased to $32.7 million from $55.0 million at October 31, 2018, primarily due to a reduction in customer demand during fiscal 2019. We do not believe backlog is a useful measure of past performance or indicative of future performance. Backlog orders as of October 31, 2019 are expected to be fulfilled in fiscal 2020.

Gross Profit. Gross profit for fiscal 2019 was $77.2 million, or 29% of sales, compared to $91.8 million, or 31% of sales, for fiscal 2018. The year-over-year decrease in gross profit as a percentage of sales was primarily due to lower sales of more complex, higher-performance machines in the European sales region, the impact of fixed costs on lower sales and production volume, and competitive pricing pressures on a global basis.

Operating Expenses. Selling, general and administrative expenses for fiscal 2019 were $54.7 million, or 21% of sales, compared to $58.0 million, or 19% of sales, in fiscal 2018, and included a favorable currency impact of $1.5 million, when translating foreign expenses to U.S. Dollars for financial reporting purposes. The year-over-year reduction in selling, general and administrative expenses were primarily due to a decrease in tradeshow expenses associated with the September 2018 IMTS, decreased variable employee compensation and other operating expense reductions implemented during fiscal 2019, partially offset by increased operating expenses associated with the U.S. companies we acquired in the fourth quarter of fiscal 2018 and the fourth quarter of fiscal 2019.

Operating Income. Operating income for fiscal 2019 was $22.5 million, or 9% of sales, compared to $33.8 million, or 11% of sales, in fiscal 2018. The year-over-year decrease in operating income was due to an overall reduction in sales volume year-over-year, particularly in Europe where our more complex, higher performance machines are primarily sold, as well as increased operating expenses associated with the U.S. companies we acquired in the fourth quarter of fiscal 2018 and the fourth quarter of fiscal 2019, partially offset by a reduction in other selling, general and administrative expenses .

Other Expense, Net. Other expense, net for fiscal 2019 decreased by $1.8 million from fiscal 2018, due mainly to a reduction in foreign currency exchange losses in fiscal 2019, compared to fiscal 2018.

Provision for Income Taxes. Our effective tax rate for fiscal 2019 was 25%, compared to 34% in fiscal 2018. The year-over-year decrease in the effective tax rate for fiscal 2019 principally resulted from the favorable impact of certain U.S. tax reform provisions available in the current fiscal year, including the full year impact of a lower U.S. corporate tax rate from 35% to 21%, a new deduction attributable to Foreign-Derived Intangible Income ("FDII") and the benefit of foreign tax credits included in these tax reform provisions. In addition, the year-over year changes in the effective tax rates included a shift in geographic mix of income and loss among tax jurisdictions. The effective tax rate for fiscal 2018 included one-time charges of $2.9 million related to the U.S. Tax Cuts and Jobs Act that was enacted in December 2017.

Net Income. Net income for fiscal 2019 was $17.5 million, or $2.55 per diluted share, a decrease of $4.0 million, or 19%, from fiscal 2018 net income of $21.5 million, or $3.15 per diluted share.

Fiscal 2018 Compared to Fiscal 2017

Sales and Service Fees. Sales and service fees for fiscal 2018 were $300.7 million, an increase of $57.0 million, or 23%, compared to fiscal 2017, and included a favorable currency impact of $10.5 million, or 4%, when translating foreign sales to U.S. Dollars for financial reporting purposes.

Net Sales and Service Fees by Geographic Region

The following table sets forth net sales and service fees by geographic region for the fiscal years ended October 31, 2018 and 2017 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2018		2017		Amount	%
Americas	$ 90,902	30%	$ 75,540	31%	$ 15,362	20%
Europe	166,202	55%	133,671	55%	32,531	24%
Asia Pacific	43,567	15%	34,456	14%	9,111	26%
Total	$ 300,671	100%	$ 243,667	100%	$ 57,004	23%

Sales in the Americas for fiscal 2018 increased by 20%, compared to fiscal 2017, due primarily to improved U.S. market conditions and increased demand from U.S. customers for the Hurco and Milltronics product lines. The increase in sales year-over-year was attributable to an increased sales volume of vertical milling and lathe machines from all product lines (Hurco, Milltronics and Takumi). European sales for fiscal 2018 increased by 24%, compared to fiscal 2017, and included a favorable currency impact of 7%, when translating foreign sales to U.S. Dollars for financial reporting purposes. The increase in European sales for fiscal 2018 resulted mainly from increased customer demand for Hurco and Takumi machines in Germany, France and the United Kingdom, as well as increased customer demand for electro-mechanical components and accessories manufactured by our wholly-owned subsidiary, LCM. Asian Pacific sales for fiscal 2018 increased by 26%, compared to fiscal 2017, and included a favorable currency impact of 3%, when translating foreign sales to U.S. Dollars for financial reporting purposes. The increase in Asian Pacific sales for fiscal 2018 was primarily attributable to increased customer demand for Hurco and Takumi machines in all Asian Pacific countries where our customers are located, particularly in China, the largest market for consumption of machines tools in the world.

Net Sales and Service Fees by Product Category

The following table sets forth net sales and service fees by product group and services for the fiscal years ended October 31, 2018 and 2017 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2018		2017		Amount	%
Computerized Machine Tools	$ 261,710	87%	$ 209,311	86%	$ 52,399	25%
Computer Control Systems and Software †	2,870	1%	2,324	1%	546	23%
Service Parts	27,501	9%	24,255	10%	3,246	13%
Service Fees	8,590	3%	7,777	3%	813	10%
Total	$ 300,671	100%	$ 243,667	100%	$ 57,004	23%

† Amounts shown do not include computer control systems and software sold as an integrated component of computerized machine systems.

Sales of computerized machine tools and computer control systems and software for fiscal 2018 increased by 25% and 23%, respectively, and each included a favorable currency impact of 4%, compared to fiscal 2017. The year-over-year increase in sales of computerized machine tools and computer control systems and software reflected increased machine sales across all three regions and product lines. Sales of service parts and service fees for fiscal 2018 increased by 13% and 10%, respectively, compared to fiscal 2017, due primarily to an increase in aftermarket sales and aftermarket service of Hurco products in North America, France and the United Kingdom.

Orders and Backlog. Orders for fiscal 2018 were a record $305.8 million, an increase of $45.2 million, or 17%, compared to fiscal 2017, and included a favorable currency impact of $13.8 million, or 5%, when translating foreign orders to U.S. Dollars.

The following table sets forth new orders booked by geographic region for the fiscal years ended October 31, 2018 and 2017 (dollars in thousands):

	Fiscal Year Ended October 31,				Increase/Decrease	
	2018		2017		Amount	%
Americas	$ 94,160	31%	$ 85,070	33%	$ 9,090	11%
Europe	170,366	56%	137,622	53%	32,744	24%
Asia Pacific	41,319	13%	37,917	14%	3,402	9%
Total	$ 305,845	100%	$ 260,609	100%	$ 45,236	17%

Orders in the Americas for fiscal 2018 increased by 11%, compared to fiscal 2017. The increase was largely attributable to improved customer demand for Hurco and Takumi vertical milling and lathe machines. European orders for fiscal 2018 increased by 24%, compared to fiscal 2017, and included a favorable currency impact of 9%, when translating foreign orders to U.S. Dollars. The year-over-year increase in European orders was largely driven by increased customer demand for Hurco and Takumi vertical milling and lathe machines in Germany and France, as well as increased demand for electro-mechanical components and accessories manufactured by LCM. Asian Pacific orders for fiscal 2018 increased by 9%, compared to fiscal 2017, and included a favorable currency impact of 3%, when translating foreign orders to U.S. Dollars. The year-over-year increase in Asian Pacific orders was largely due to increased customer demand for Hurco vertical milling machines in India, China and Southeast Asia.

Backlog at October 31, 2018 increased to $55.0 million, compared to $52.0 million at October 31, 2017, primarily due to an increase in customer orders during fiscal 2018. We do not believe backlog is a useful measure of past performance or indicative of future performance.

Gross Profit. Gross profit for fiscal 2018 was $91.8 million, or 31% of sales, compared to $70.6 million, or 29% of sales, for fiscal 2017. The year-over-year increase in gross profit as a percentage of sales reflected increased machine sales across all three regions and product lines and the favorable impact of foreign currency translation compared to fiscal 2017.

Operating Expenses. Selling, general and administrative expenses for fiscal 2018 were $58.0 million, or 19% of sales, compared to $49.7 million, or 20% of sales, in fiscal 2017, and included an unfavorable currency impact of $1.3 million, when translating foreign expenses to U.S. Dollars for financial reporting purposes. The year-over-year increase in selling, general and administrative expenses was driven by increased expenses for tradeshows, global sales and marketing, employee incentive compensation and the unfavorable impact of foreign currency translation compared to fiscal 2017.

Operating Income. Operating income for fiscal 2018 was $33.8 million, or 11% of sales, compared to $20.9 million, or 9% of sales, in fiscal 2017. The year-over-year increase in operating income was primarily attributable to increased machine sales across all three regions and product lines and the favorable impact of foreign currency translation compared to fiscal 2017.

Other Income (Expense). Other income (expense) for fiscal 2018 increased by $1.1 million from fiscal 2017, due mainly to increased foreign currency losses experienced in 2018.

Provision for Income Taxes. Our effective tax rate for fiscal 2018 was 34%, compared to 27% for fiscal 2017. The year-over-year increase in the effective tax rate for fiscal 2018 was primarily attributable to one-time charges of $2.8 million related to the U.S. Tax Cuts and Jobs Act that was enacted in December 2017. The impact of these one-time charges increased the effective tax rate by approximately 39% for the first quarter of fiscal 2018. Excluding the impact of these charges, earnings per diluted share would have been $0.41 higher than the earnings per diluted share we reported for fiscal 2018.

Net Income. Net income for fiscal 2018 was $21.5 million, or $3.15 per diluted share, an increase of $6.4 million, or 42%, from fiscal 2017 net income of $15.1 million, or $2.25 per diluted share.

Liquidity and Capital Resources

At October 31, 2019, we had cash and cash equivalents of $56.9 million, compared to $77.2 million at October 31, 2018. The decrease in cash and cash equivalents was primarily a result of a decrease in accounts receivable, partially offset by an increase in inventories year-over-year. Approximately 44% of our $56.9 million of cash and cash equivalents is held in the U.S. The balance is attributable to our foreign operations and is held in the local currencies of our various foreign entities, subject to fluctuations in currency exchange rates. We do not believe that the indefinite reinvestment of these funds offshore impairs our ability to meet our domestic working capital needs.

Working capital (including cash and cash equivalents) was $207.2 million at October 31, 2019, compared to $194.6 million at October 31, 2018. The increase in working capital was mostly driven by an increase in inventories and a reduction in accounts payable. Inventories were $148.9 million at October 31, 2019, compared to $137.6 million at October 31, 2018. Inventory turns at October 31, 2019 were 1.3, compared to 1.6 turns at October 31, 2018.

Capital expenditures were $4.9 million in fiscal 2019, compared to $5.9 million in fiscal 2018. Capital expenditures for fiscal 2019 were primarily for software development costs, purchases of factory equipment for production facilities, and purchases of general software and equipment for sales and service divisions. We funded these expenditures with cash flows from operations.

The purchase price for the ProCobots acquisition has been preliminarily allocated to the assets acquired and the liabilities assumed based on their fair values, which approximated $4.4 million.

On December 7, 2012, we entered into a credit agreement, which was subsequently amended on May 9, 2014, June 5, 2014, December 5, 2014 and December 6, 2016 (as amended, the “2012 Credit Agreement”) with JP Morgan Chase Bank, N.A that provided us with an unsecured revolving credit and letter of credit facility. The 2012 Credit Agreement terminated on its scheduled maturity date of December 31, 2018.

On December 31, 2018, we and our subsidiary, Hurco B.V., entered into a new credit agreement (the “2018 Credit Agreement”) with Bank of America, N.A., as the lender. The 2018 Credit Agreement replaced the 2012 Credit Agreement. The 2018 Credit Agreement provides for an unsecured revolving credit and letter of credit facility in a maximum aggregate amount of $40.0 million. The 2018 Credit Agreement provides that the maximum amount of outstanding letters of credit at any one time may not exceed $10.0 million, the maximum amount of outstanding loans made to our subsidiary Hurco B.V. at any one time may not exceed $20.0 million, and the maximum amount of all outstanding loans denominated in alternative currencies at any one time may not exceed $20.0 million. Under the 2018 Credit Agreement, we and Hurco B.V. are borrowers, and certain of our other subsidiaries are guarantors. The scheduled maturity date of the 2018 Credit Agreement is December 31, 2020.

Borrowings under the 2018 Credit Agreement bear interest at floating rates based on, at our option, either (i) a LIBOR-based rate, or other alternative currency-based rate approved by the lender, plus 0.75% per annum, or (ii) a base rate (which is the highest of (a) the federal funds rate plus 0.50%, (b) the prime rate or (c) the one month LIBOR-based rate plus 1.00%), plus 0.00% per annum. Outstanding letters of credit will carry an annual rate of 0.75%.

The 2018 Credit Agreement contains customary affirmative and negative covenants and events of default, including covenants (1) restricting us from making certain investments, loans, advances and acquisitions (but permitting us to make investments in subsidiaries of up to $10.0 million); (2) restricting us from making certain payments, including cash dividends, except that we may pay cash dividends as long as immediately before and after giving effect to such payment, the sum of the unused amount of the commitments under the 2018 Credit Agreement plus our cash on hand is not less than $10.0 million, and as long as we are not in default before and after giving effect to such dividend payments; (3) requiring that we maintain a minimum working capital of $125.0 million; and (4) requiring that we maintain a minimum tangible net worth of $170.0 million.

We may use the proceeds from advances under the 2018 Credit Agreement for general corporate purposes.

In December 2018, in connection with our entry into the 2018 Credit Agreement, (1) using cash on hand, we repaid in full the $1.4 million outstanding under, and terminated, our credit facility in China and (2) we terminated our United Kingdom credit facility. In March 2019, our wholly-owned subsidiaries in Taiwan, HML, and China, NHML, closed on uncommitted revolving credit facilities with maximum aggregate amounts of 150 million New Taiwan Dollars (the “Taiwan credit facility”) and 32.5 million Chinese Yuan (the “China credit facility”), respectively. Both the Taiwan and China credit facilities have a final maturity date of March 5, 2020.

As a result, as of October 31, 2019, our existing credit facilities consist of our €1.5 million revolving credit facility in Germany, the 150 million New Taiwan Dollars Taiwan credit facility, the 32.5 million Chinese Yuan China credit facility and the $40.0 million revolving credit facility under the 2018 Credit Agreement.

There were no borrowings under any of our credit facilities as of October 31, 2019, and we had $1.4 million of borrowings as of October 31, 2018. As of October 31, 2019, we were in compliance with the covenants contained in all of our credit facilities, and there was $51.2 million of available borrowing capacity thereunder.

We believe our cash position and borrowing capacity under our credit facilities provide adequate liquidity to fund our operations over the next twelve months and allow us to remain committed to our strategic plan of product innovation and targeted penetration of developing markets.

In the last six years, we have implemented a strategic plan to expand our market reach to more customers with more products on a global basis. While the Hurco-branded computer control systems have been and continue to be our premium flagship product line, we have added other products to our portfolio that provide product diversity and market penetration opportunity, while minimizing the impact of geographic cyclicality, with products priced from entry-level to high performance serving a variety of different industries. We have not changed our overall strategy to design, manufacture and sell a comprehensive line of computerized machine tools; rather, we have enhanced this strategy through growth both organically and through acquisitions to ensure long-term stability and overall profitability.

We continue to receive and review information on businesses and assets for potential acquisition, including intellectual property assets that are available for purchase.

Contractual Obligations and Commitments

The following is a table of contractual obligations and commitments as of October 31, 2019 (in thousands):

	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Operating leases	$ 13,401	$ 4,015	$ 5,373	$ 2,213	$ 1,800
Accrued and deferred taxes and credits	6,188	133	639	506	4,911
Total	$ 19,589	$ 4,148	$ 6,012	$ 2,719	$ 6,711

In addition to the contractual obligations and commitments disclosed above, we also have a variety of other obligations for the procurement of materials and services, none of which subject us to any material non-cancelable commitments. While some of these obligations arise under long-term supply agreements, we are not committed under these agreements to accept or pay for requirements that are not needed to meet our production needs. We have no material minimum purchase commitments or "take-or-pay" type agreements or arrangements. Unrecognized tax benefits in the amount of approximately $0.2 million, excluding any interest and penalties, have been excluded from the table above because we are unable to determine a reasonably reliable estimate of the timing of future payment.

We expect capital spending in fiscal 2020 to be approximately $12.4 million, which includes investments for real estate development, software development, factory equipment and production facilities, as well as general software and equipment for selling facilities. We expect to fund these commitments with cash on hand and cash generated from operations.

Off Balance Sheet Arrangements

From time to time, our subsidiaries guarantee third party payment obligations in connection with the sale of machines to customers that use financing. We follow Financial Accounting Standards Board ("FASB") guidance for accounting for guarantees (codified in Accounting Standards Codification ("ASC") 460). As of October 31, 2019, we had 21 outstanding third party payment guarantees totaling approximately $0.5 million. The terms of these guarantees are consistent with the underlying customer financing terms. Upon shipment of a machine, the customer assumes the risk of ownership. The customer does not obtain title, however, until the customer has paid for the machine. A retention of title clause allows us to recover the machine if the customer defaults on the financing. We accrue liabilities under these guarantees at fair value, which amounts are insignificant.

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with U.S. Generally Accepted Accounting Principles. The preparation of financial statements in conformity with those accounting principles requires us to make judgments and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Those judgments and estimates have a significant effect on the financial statements because they result primarily from the need to make estimates about the effects of matters that are inherently uncertain. Actual results could differ from those estimates. Our accounting policies, including those described below, are frequently evaluated as our judgment and estimates are based upon historical experience and on various other assumptions that we believe to be reasonable under the circumstances.

Revenue Recognition – We recognize revenues from the sale of machine tools, components and accessories and services and reflect the consideration to which we expect to be entitled. We record revenues based on a five-step model in accordance with FASB guidance codified in ASC 606. In accordance with ASC 606, we have defined contracts as agreements with our customers and distributors in the form of purchase orders, packing or shipping documents, invoices, and, periodically, verbal requests for components and accessories. For each contract, we identify our performance obligations, which is delivering goods or services, determine the transaction price, allocate the contract transaction price to each of the performance obligations (when applicable), and recognize the revenue when (or as) the performance obligation to the customer is fulfilled.

A good or service is transferred when the customer obtains control of that good or service. Our computerized machine tools are general purpose computer-controlled machine tools that are typically used in stand-alone operations. Prior to shipment, we test each machine to ensure the machine's compliance with standard operating specifications. We deem that the customer obtains control upon delivery of the product and that obtaining control is not contingent upon contractual customer acceptance. Therefore, we recognize revenue from sales of our machine tool systems upon delivery of the product to the customer or distributor, which is normally at the time of shipment.

Depending upon geographic location, after shipment, a machine may be installed at the customer's facilities by a distributor, independent contractor or by one of our service technicians. In most instances, where a machine is sold through a distributor, we have no installation involvement. If sales are direct or through sales agents, we will typically complete the machine installation, which consists of the reassembly of certain parts that were removed for shipping and the re-testing of the machine to ensure that it is performing within the standard specifications. We consider the machine installation process for our three-axis machines to be inconsequential and perfunctory. For our five-axis machines that we install, we estimate the fair value of the installation performance obligation and recognize that installation revenue on a prorata basis over the period of the installation process.

From time to time, and depending upon geographic location, we may provide training or freight services. We consider these services to be perfunctory within the context of the contract, as the value of these services typically does not rise to a material level as a component of the total contract value. Service fees from maintenance contracts are deferred and recognized in earnings on a prorata basis over the term of the contract and are generally sold on a stand-alone basis. Customer discounts and estimated product returns are considered variable consideration and are recorded as a reduction of revenue in the same period that the related sales are recorded. We have reviewed the overall sales transactions for variable consideration and have determined that these amounts are not significant.

Inventories – We determine at each balance sheet date how much, if any, of our inventory may ultimately prove to be either unsalable or unsalable at its carrying cost. Reserves are established to effectively adjust the carrying value of such inventory to lower of cost (first-in, first-out method) or net realizable value. To determine the appropriate level of valuation reserves, we evaluate current stock levels in relation to historical and expected patterns of demand for all of our products. We evaluate the need for changes to valuation reserves based on market conditions, competitive offerings and other factors on a regular basis.

Income Taxes – We account for income taxes and the related accounts under the asset and liability method. Deferred tax assets and liabilities are measured using enacted income tax rates in each jurisdiction in effect for the year in which the temporary differences are expected to be recovered or settled. These deferred tax assets are reduced by a valuation allowance, which is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized. Net deferred tax assets and liabilities are classified as non-current in the consolidated financial statements. Our judgment regarding the realization of deferred tax assets may change due to future profitability and market conditions, changes in U.S. or foreign tax laws and other factors. These changes, if any, may require material adjustments to these deferred tax assets and an accompanying reduction or increase in net income in the period when such determinations are made.

The determination of our provision for income taxes requires judgment, the use of estimates and the interpretation and application of complex federal, state and foreign tax laws. Our provision for income taxes reflects a combination of income earned and taxed at the federal and state level in the U.S., as well as in various foreign jurisdictions.

In addition to the risks to the effective tax rate described above, the future effective tax rate reflected in forward-looking statements is based on currently effective tax laws. Significant changes in those laws could materially affect these estimates.

We operate in multiple jurisdictions through wholly-owned subsidiaries, and our global structure is complex. The estimates of our uncertain tax positions involve judgments and assessment of the potential tax implications. We recognize uncertain tax positions when it is more likely than not that the tax position will be sustained upon examination by relevant taxing authorities, based on the technical merits of the position. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. Our tax positions are subject to audit by taxing authorities across multiple global jurisdictions and the resolution of such audits may span multiple years. Tax law is complex and often subject to varied interpretations, accordingly, the ultimate outcome with respect to taxes we may owe may differ from the amounts recognized.

Impairment of Long-Lived Assets – We are required periodically to review the recoverability of certain assets, including property, plant and equipment, intangible assets and goodwill, based on projections of anticipated future cash flows, including future profitability assessments of various product lines. We estimate cash flows using internal budgets based on recent sales data.

Capitalized Software Development Costs – Costs incurred to develop computer software products and significant enhancements to software features of existing products are capitalized as required by FASB guidance relating to accounting for the costs of computer software to be sold, leased, or otherwise marketed, and such capitalized costs are amortized over the estimated product life of the related software. The determination as to when in the product development cycle technological feasibility has been established, and the expected product life, require judgments and estimates by management and can be affected by technological developments, innovations by competitors and changes in market conditions affecting demand. We periodically review the carrying values of these assets and make judgments as to ultimate realization considering the above-mentioned risk factors.

Derivative Financial Instruments – Critical aspects of our accounting policy for derivative financial instruments that we designate as hedging instruments include conditions that require that critical terms of a hedging instrument are essentially the same as a hedged forecasted transaction. Another important element of our policy demands that formal documentation be maintained as required by FASB guidance relating to accounting for derivative instruments and hedging activities. Failure to comply with these conditions would result in a requirement to recognize changes in market value of hedge instruments in earnings. We routinely monitor significant estimates, assumptions, and judgments associated with derivative instruments, and compliance with formal documentation requirements.

Stock Compensation – We account for share-based compensation according to FASB guidance relating to share-based payments, which requires the measurement and recognition of compensation expense for all share-based awards made to employees and directors based on estimated fair values on the grant date. This guidance requires that we estimate the fair value of share-based awards on the date of grant and recognize as expense the value of the portion of the award that is ultimately expected to vest over the requisite service period.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Interest on borrowings under our bank credit agreements are tied to prevailing domestic and foreign interest rates. At October 31, 2019, we had no borrowings outstanding under any of our credit facilities.

Foreign Currency Exchange Risk

In fiscal 2019, we derived approximately 63% of our revenues from customers located outside of the Americas, where we invoiced and received payments in several foreign currencies. All of our computerized machine tools and computer control systems, as well as certain proprietary service parts, are sourced by our U.S.-based engineering and manufacturing division and re-invoiced to our foreign sales and service subsidiaries, primarily in their functional currencies.

Our products are sourced from foreign suppliers or built to our specifications by either our wholly-owned subsidiaries in Taiwan, the U.S., Italy and China or an affiliated contract manufacturer in Taiwan. Our purchases are predominantly in foreign currencies and in some cases our arrangements with these suppliers include foreign currency risk sharing agreements, which reduce (but do not eliminate) the effects of currency fluctuations on product costs. The predominant portion of the exchange rate risk associated with our product purchases relates to the New Taiwan Dollar and the Euro.

We enter into foreign currency forward exchange contracts from time to time to hedge the cash flow risk related to forecasted inter-company sales and purchases denominated in, or based on, foreign currencies (primarily the Euro, Pound Sterling, and New Taiwan Dollar). We also enter into foreign currency forward exchange contracts to protect against the effects of foreign currency fluctuations on receivables and payables denominated in foreign currencies. We do not speculate in the financial markets and, therefore, do not enter into these contracts for trading purposes.

Forward contracts for the sale or purchase of foreign currencies as of October 31, 2019, which are designated as cash flow hedges under FASB guidance related to accounting for derivative instruments and hedging activities, were as follows (in thousands, except weighted average forward rates):

Forward Contracts	Notional Amount in Foreign Currency	Weighted Avg. Forward Rate	Contract Amount at Forward Rates in U.S. Dollars: Contract Date	Contract Amount at Forward Rates in U.S. Dollars: October 31, 2019	Maturity Dates
Sale Contracts:					
Euro	14,675	1.1464	16,823	16,513	Nov 2019 - Oct 2020
Sterling	4,150	1.3072	5,425	5,394	Nov 2019 - Oct 2020
Purchase Contracts:					
New Taiwan Dollar	560,000	30.1610*	18,567	18,711	Nov 2019 - Oct 2020

*New Taiwan Dollars per U.S. Dollar

Forward contracts for the sale or purchase of foreign currencies as of October 31, 2019, which were entered into to protect against the effects of foreign currency fluctuations on receivables and payables and are not designated as hedges under this guidance denominated in foreign currencies, were as follows (in thousands, except weighted average forward rates):

Forward Contracts	Notional Amount in Foreign Currency	Weighted Avg. Forward Rate	Contract Amount at Forward Rates in U.S. Dollars		Maturity Dates
			Contract Date	October 31, 2019	
Sale Contracts:					
Euro	28,829	1.1308	32,599	32,457	Nov 2019 – Oct 2020
Sterling	2,309	1.2479	2,882	2,994	Nov 2019 – Jan 2020
South African Rand	12,222	0.0675	825	804	Jan 2020
Purchase Contracts:					
New Taiwan Dollar	856,033	30.6473*	27,932	28,247	Nov 2019 – Feb 2020

* New Taiwan Dollars per U.S. Dollar

We are also exposed to foreign currency exchange risk related to our investment in net assets in foreign countries. To manage this risk, we entered into a forward contract with a notional amount of €3.0 million in November 2018. We designated this forward contract as a hedge of our net investment in Euro denominated assets. We selected the forward method under the FASB guidance related to the accounting for derivative instruments and hedging activities. The forward method requires all changes in the fair value of the contract to be reported as a cumulative translation adjustment, net of tax, in Accumulated other comprehensive loss in the same manner as the underlying hedged net assets. This forward contract matured in November 2019 and we entered into a new forward contract for the same notional amount that is set to mature in November 2020. As of October 31, 2019, we had $804,000 of realized gains and $129,000 of unrealized gains, net of tax, recorded as cumulative translation adjustments in Accumulated other comprehensive loss, related to these forward contracts.

Forward contracts designated as net investment hedges under this guidance as of October 31, 2019 were as follows (in thousands, except weighted average forward rates):

Forward Contracts	Notional Amount in Foreign Currency	Weighted Avg. Forward Rate	Contract Amount at Forward Rates in U.S. Dollars		Maturity Date
			Contract Date	October 31, 2019	
Sale Contracts:					
Euro	3,000	1.1713	3,514	3,347	Nov 2019

Management's Annual Report on Internal Control over Financial Reporting

To the Shareholders and
Board of Directors
of Hurco Companies, Inc.

Management of Hurco Companies, Inc. (the "Company") has assessed the effectiveness of the Company's internal control over financial reporting as of October 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO). Management is responsible for the Company's financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting.

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

In management's opinion, the Company's internal control over financial reporting as of October 31, 2019, was effective based on the criteria specified above.

Our independent registered public accounting firm, RSM US LLP ("RSM"), which also audited our consolidated financial statements, audited the effectiveness of our internal control over financial reporting as of October 31, 2019. RSM has issued their attestation report, which is included in Part II, Item 8 of this Annual Report on Form 10-K.

/s/ Michael Doar
Michael Doar
Chairman and Chief Executive Officer

/s/ Sonja K. McClelland
Sonja K. McClelland
Executive Vice President, Secretary, Treasurer and Chief Financial Officer

Indianapolis, Indiana
January 3, 2020

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Shareholders
and the Board of Directors
of Hurco Companies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Hurco Companies, Inc. and its subsidiaries (the Company) as of October 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended October 31, 2019, and the related notes and schedule listed in Item 15(a) (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of October 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended October 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of October 31, 2019, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013, and our report dated January 3, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ RSM US LLP

We have served as the Company's auditor since 2017.

Indianapolis, Indiana
January 3, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders
and the Board of Directors
of Hurco Companies, Inc.

Opinion on the Internal Control Over Financial Reporting

We have audited Hurco Companies, Inc.'s (the Company) internal control over financial reporting as of October 31, 2019, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2019, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of October 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows, for the three years then ended, and the related notes and schedule listed in Item 15(a) of the Company, and our report dated January 3, 2020 expressed an unqualified opinion.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ RSM US LLP

Indianapolis, Indiana
January 3, 2020

HURCO COMPANIES, INC.
CONSOLIDATED STATEMENTS OF INCOME

	Year Ended October 31,		
	2019	2018	2017
	(In thousands, except per share amounts)		
Sales and service fees	$ 263,377	$ 300,671	$ 243,667
Cost of sales and service	186,169	208,865	173,103
Gross profit	77,208	91,806	70,564
Selling, general and administrative expenses	54,668	58,010	49,661
Operating income	22,540	33,796	20,903
Interest expense	62	100	91
Interest income	462	189	41
Investment income	356	339	138
Income from equity investments	583	639	505
Other expense, net	555	2,367	780
Income before income taxes	23,324	32,496	20,716
Provision for income taxes	5,829	11,006	5,601
Net income	$ 17,495	$ 21,490	$ 15,115
Income per common share – basic	$ 2.57	$ 3.19	$ 2.27
Weighted average common shares outstanding – basic	6,759	6,700	6,615
Income per common share – diluted	$ 2.55	$ 3.15	$ 2.25
Weighted average common shares outstanding – diluted	6,815	6,771	6,680
Dividends paid per share	$ 0.47	$ 0.43	$ 0.39

The accompanying notes are an integral part of the consolidated financial statements.

HURCO COMPANIES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended October 31,		
	2019	**2018**	**2017**
		(In thousands)	
Net Income	$ 17,495	$ 21,490	$ 15,115
Other comprehensive income (loss):			
Translation gain (loss) of foreign currency financial statements	550	(3,183)	4,916
(Gain) / loss on derivative instruments reclassified into operations, net of tax of $(70), $453, and $(745), respectively	(235)	1,355	(1,354)
Gain / (loss) on derivative instruments, net of tax of $183, $52, and $(390), respectively	615	155	(709)
Total other comprehensive income (loss)	930	(1,673)	2,853
Comprehensive income	$ 18,425	$ 19,817	$ 17,968

The accompanying notes are an integral part of the consolidated financial statements.

HURCO COMPANIES, INC.
CONSOLIDATED BALANCE SHEETS

ASSETS	As of October 31, 2019	As of October 31, 2018
	(In thousands, except share and per share data)	
Current assets:		
Cash and cash equivalents	$ 56,943	$ 77,170
Accounts receivable, less allowance for doubtful accounts of $891 in 2019 and $1,027 in 2018	43,279	54,414
Inventories, net	148,851	137,609
Derivative assets	1,391	3,085
Prepaid assets	9,414	7,332
Other	1,983	1,825
Total current assets	261,861	281,435
Property and equipment:		
Land	868	868
Building	7,352	7,352
Machinery and equipment	28,846	26,840
Leasehold improvements	4,902	3,801
	41,968	38,861
Less accumulated depreciation and amortization	(28,055)	(25,902)
Total property and equipment, net	13,913	12,959
Non-current assets:		
Software development costs, less accumulated amortization	8,318	7,452
Goodwill	5,847	2,377
Intangible assets, net	1,096	938
Deferred income taxes	1,846	2,234
Investments and other assets, net	8,184	8,012
Total non-current assets	25,291	21,013
Total assets	$ 301,065	$ 315,407
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 33,031	$ 54,131
Accounts payable-related parties	938	3,387
Accrued payroll and employee benefits	11,564	14,032
Accrued income taxes	1,936	5,180
Accrued expenses and other	5,015	4,122
Accrued warranty expenses	1,760	2,497
Derivative liabilities	388	2,020
Short-term debt	--	1,434
Total current liabilities	54,632	86,803
Non-current liabilities:		
Accrued tax liability	2,036	2,194
Deferred income taxes	160	--
Deferred credits and other	3,992	3,557
Total non-current liabilities	6,188	5,751
Shareholders' equity:		
Preferred stock: no par value per share, 1,000,000 shares authorized, no shares issued	--	--
Common stock: no par value, $.10 stated value per share, 12,500,000 shares authorized, 6,967,719 and 6,891,508 shares issued; and 6,767,237 and 6,723,160 shares outstanding, as of October 31, 2019 and October 31, 2018, respectively	677	672
Additional paid-in capital	66,350	64,185
Retained earnings	182,151	167,859
Accumulated other comprehensive loss	(8,933)	(9,863)
Total shareholders' equity	240,245	222,853
Total liabilities and shareholders' equity	$ 301,065	$ 315,407

The accompanying notes are an integral part of the consolidated financial statements.

HURCO COMPANIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Cash flows from operating activities:			
Net income	$ 17,495	$ 21,490	$ 15,115
Adjustments to reconcile net income to net cash provided by (used for) operating activities, net of acquisitions:			
Provision for doubtful accounts	(136)	388	(25)
Deferred income taxes	260	(530)	1,108
Equity in income of affiliates	(583)	(639)	(505)
Foreign currency (gain) loss	730	755	(851)
Unrealized (gain) loss on derivatives	(388)	456	(411)
Depreciation and amortization	3,745	3,713	3,616
Stock-based compensation	2,670	2,504	1,698
Change in assets and liabilities, net of acquisitions:			
(Increase) decrease in accounts receivable	11,239	(5,148)	563
(Increase) decrease in inventories	(10,499)	(20,386)	1,638
(Increase) decrease in prepaid expenses	(1,474)	710	80
Increase (decrease) in accounts payable	(23,780)	10,788	8,529
Increase (decrease) in accrued expenses	(2,354)	3,090	1,331
Increase (decrease) in accrued income tax	(3,259)	2,934	(704)
Increase (decrease) in accrued tax liability	(157)	2,061	(844)
Net change in derivative assets and liabilities	330	(1,178)	964
Other	(252)	4	(930)
Net cash provided by (used for) operating activities	(6,413)	21,012	30,372
Cash flows from investing activities:			
Proceeds from sale of property and equipment	83	180	--
Purchase of property and equipment	(3,169)	(3,537)	(2,181)
Software development costs	(1,701)	(2,326)	(2,264)
Other investments	243	233	417
Acquisition of business	(4,353)	(1,156)	--
Net cash provided by (used for) investing activities	(8,897)	(6,606)	(4,028)
Cash flows from financing activities:			
Proceeds from exercise of common stock options	--	847	534
Dividends paid	(3,203)	(2,898)	(2,590)
Taxes paid related to net settlement of restricted shares	(499)	(502)	(295)
Repayment of short-term debt	(1,450)	--	--
Net cash provided by (used for) financing activities	(5,152)	(2,553)	(2,351)
Effect of exchange rate changes on cash and cash equivalents	235	(990)	1,097
Net increase (decrease) in cash and cash equivalents	(20,227)	10,863	25,090
Cash and cash equivalents at beginning of year	77,170	66,307	41,217
Cash and cash equivalents at end of year	$ 56,943	$ 77,170	$ 66,307
Supplemental disclosures:			
Cash paid for:			
Interest	$ 11	$ 64	$ 66
Income taxes, net	$ 11,025	$ 6,172	$ 4,867

The accompanying notes are an integral part of the consolidated financial statements.

HURCO COMPANIES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(In thousands, except shares outstanding)	Common Stock Shares Outstanding	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total
Balances, October 31, 2016	**6,573,103**	**$ 657**	**$ 59,119**	**$ 136,742**	**$ (11,043)**	**$ 185,475**
Net income	--	--	--	15,115	--	15,115
Other comprehensive income (loss)	--	--	--	--	2,853	2,853
Exercise of common stock options	29,164	3	531	--	--	534
Stock-based compensation expense	38,930	4	1,694	--	--	1,698
Dividends paid	--	--	--	(2,590)	--	(2,590)
Balances, October 31, 2017	**6,641,197**	**$ 664**	**$ 61,344**	**$ 149,267**	**$ (8,190)**	**$ 203,085**
Net income	--	--	--	21,490	--	21,490
Other comprehensive income (loss)	--	--	--	--	(1,673)	(1,673)
Exercise of common stock options	41,680	4	843	--	--	847
Stock-based compensation expense, net of taxes withheld for vested restricted shares	40,283	4	1,998	--	--	2,002
Dividends paid	--	--	--	(2,898)	--	(2,898)
Balances, October 31, 2018	**6,723,160**	**$ 672**	**$ 64,185**	**$ 167,859**	**$ (9,863)**	**$ 222,853**
Net income	--	--	--	17,495	--	17,495
Other comprehensive income (loss)	--	--	--	--	930	930
Stock-based compensation expense, net of taxes withheld for vested restricted shares	44,077	5	2,165	--	--	2,170
Dividends paid	--	--	--	(3,203)	--	(3,203)
Balances, October 31, 2019	**6,767,237**	**$ 677**	**$ 66,350**	**$ 182,151**	**$ (8,933)**	**$ 240,245**

The accompanying notes are an integral part of the consolidated financial statements.

HURCO COMPANIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation. The consolidated financial statements include the accounts of Hurco Companies, Inc. (an Indiana corporation) and its wholly-owned subsidiaries. We have a 35% ownership interest in a Taiwan affiliate that is accounted for using the equity method. Our investment in that affiliate was approximately $4.2 million and $4.0 million as of October 31, 2019 and 2018, respectively. That investment is included in Investments and other assets, net on the accompanying Consolidated Balance Sheets. Intercompany accounts and transactions have been eliminated.

Reclassifications. Certain prior year amounts have been reclassified to conform to the current year presentation. This reclassification has no impact on previously reported net income or shareholders' equity.

Statements of Cash Flows. We consider all highly liquid investments with a stated maturity at the date of purchase of three months or less to be cash equivalents. Cash flows from hedges are classified consistent with the items being hedged.

Translation of Foreign Currencies. All balance sheet accounts of non-U.S. subsidiaries are translated at the exchange rate as of the end of the year and translation adjustments of foreign currency balance sheets are recorded as a component of Accumulated other comprehensive loss in shareholders' equity. Income and expenses are translated at the average exchange rates during the year. Cumulative foreign currency translation adjustments, net of gains related to our net investment hedges, as of October 31, 2019, were a net loss of $10.0 million, net of tax, and are included in Accumulated other comprehensive loss. Foreign currency transaction gains and losses are recorded as income or expense as incurred and are recorded in Other expense, net.

Hedging. We are exposed to certain market risks relating to our ongoing business operations, including foreign currency risk, interest rate risk and credit risk. We manage our exposure to these and other market risks through regular operating and financing activities. Currently, the only risk that we manage through the use of derivative instruments is foreign currency risk.

We operate on a global basis and are exposed to the risk that our financial condition, results of operations and cash flows could be adversely affected by changes in foreign currency exchange rates. To reduce the potential effects of foreign exchange rate movements on our net equity investment in one of our foreign subsidiaries, and the gross profit and net earnings of certain of our foreign subsidiaries, we enter into derivative financial instruments in the form of foreign exchange forward contracts with a major financial institution. We are primarily exposed to foreign currency exchange rate risk with respect to transactions and net assets denominated in Euros, Pounds Sterling, Indian Rupee, South African Rand, Singapore Dollars, Chinese Yuan, Polish Zloty, and New Taiwan Dollars.

We account for derivative instruments as either assets or liabilities and carry them at fair value. The accounting for changes in the fair value of a derivative depends on the intended use of the derivative and the resulting designation. For derivative instruments designated as a fair value hedge, the gain or loss is recognized in earnings in the period of change together with the offsetting loss or gain on the hedged item attributed to the risk being hedged. For a derivative instrument designated as a cash flow hedge, the effective portion of the derivative's gain or loss is initially reported as a component of Accumulated other comprehensive loss in shareholders' equity and subsequently reclassified into earnings when the hedged exposure affects earnings. The ineffective portion of the gain or loss is reported in earnings immediately.

For derivative instruments that are not designated as accounting hedges under the Derivatives and Hedging Topic of the Financial Accounting Standards Board (the "FASB"), changes in fair value are recognized in earnings in the period of change. We do not hold or issue derivative financial instruments for speculative trading purposes. We only enter into derivatives with one counterparty, which is among one of the largest U.S. banks (ranked by assets), in order to minimize credit risk and, to date, that counterparty has not failed to meet its financial obligations under such contracts.

Derivatives Designated as Hedging Instruments

We enter into foreign currency forward exchange contracts periodically to hedge certain forecasted inter-company sales and purchases denominated in foreign currencies (the Pound Sterling, Euro and New Taiwan Dollar). The purpose of these instruments is to mitigate the risk that the U.S. Dollar net cash inflows and outflows resulting from sales and purchases denominated in foreign currencies will be adversely affected by changes in exchange rates. These forward contracts have been designated as cash flow hedge instruments, and are recorded in the Consolidated Balance Sheets at fair value in Derivative assets and Derivative liabilities. The effective portion of the gains and losses resulting from the changes in the fair value of these hedge contracts are deferred in Accumulated other comprehensive loss and recognized as an adjustment to Cost of sales and service in the period that the corresponding inventory sold that is the subject of the related hedge contract is recognized, thereby providing an offsetting economic impact against the corresponding change in the U.S. Dollar value of the inter-company sale or purchase being hedged. The ineffective portion of gains and losses resulting from the changes in the fair value of these hedge contracts is reported in Other expense, net immediately. We perform quarterly assessments of hedge effectiveness by verifying and documenting the critical terms of the hedge instrument and determining that forecasted transactions have not changed significantly. We also assess on a quarterly basis whether there have been adverse developments regarding the risk of a counterparty default.

We had forward contracts outstanding as of October 31, 2019, in Euros, Pounds Sterling and New Taiwan Dollars with set maturity dates ranging from November 2019 through October 2020. The contract amount at forward rates in U.S. Dollars at October 31, 2019 for Euros and Pounds Sterling was $16.5 million and $5.4 million, respectively. The contract amount at forward rates in U.S. Dollars for New Taiwan Dollars was $18.7 million at October 31, 2019. At October 31, 2019, we had approximately $612,000 of gains, net of tax, related to cash flow hedges deferred in Accumulated other comprehensive loss. Of this amount, $373,000 represented unrealized gains, net of tax, related to cash flow hedge instruments that remain subject to currency fluctuation risk. The majority of these deferred gains will be recorded as an adjustment to Cost of sales and service in periods through October 2020, in which the corresponding inventory that is the subject of the related hedge contract is sold, as described above.

We are exposed to foreign currency exchange risk related to our investment in net assets in foreign countries. To manage this risk, we entered into a forward contract with a notional amount of €3.0 million in November 2018. We designated this forward contract as a hedge of our net investment in Euro denominated assets. We selected the forward method under the FASB guidance related to the accounting for derivative instruments and hedging activities. The forward method requires all changes in the fair value of the contract to be reported as a cumulative translation adjustment, net of tax, in Accumulated other comprehensive loss in the same manner as the underlying hedged net assets. This forward contract matured in November 2019, and we entered into a new forward contract for the same notional amount that is set to mature in November 2020. As of October 31, 2019, we had a realized gain of $804,000 and an unrealized gain of $129,000, net of tax, recorded as cumulative translation adjustments in Accumulated other comprehensive loss, related to these forward contracts.

Derivatives Not Designated as Hedging Instruments

We enter into foreign currency forward exchange contracts to protect against the effects of foreign currency fluctuations on receivables and payables denominated in foreign currencies. These derivative instruments are not designated as hedges under FASB guidance and, as a result, changes in their fair value are reported currently as Other expense, net in the Consolidated Statements of Income consistent with the transaction gain or loss on the related receivables and payables denominated in foreign currencies.

We had forward contracts outstanding as of October 31, 2019, in Euros, Pound Sterling, South African Rand and New Taiwan Dollars with set maturity dates ranging from November 2019 through October 2020. The contract amounts at forward rates in U.S. Dollars at October 31, 2019 for Euros, Pounds Sterling and South African Rand totaled $36.3 million. The contract amount at forward rates in U.S. Dollars for New Taiwan Dollars was $28.2 million at October 31, 2019.

Fair Value of Derivative Instruments

We recognize the fair value of derivative instruments as assets and liabilities on a gross basis on our Consolidated Balance Sheets. As of October 31, 2019 and October 31, 2018, all derivative instruments were recorded at fair value on the balance sheets as follows (in thousands):

	2019		2018	
Derivatives	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Designated as Hedging Instruments:				
Foreign exchange forward contracts	Derivative assets	$ 751	Derivative assets	$ 2,654
Foreign exchange forward contracts	Derivative liabilities	$ 99	Derivative liabilities	$ 1,616
Not Designated as Hedging Instruments:				
Foreign exchange forward contracts	Derivative assets	$ 640	Derivative assets	$ 431
Foreign exchange forward contracts	Derivative liabilities	$ 289	Derivative liabilities	$ 404

Effect of Derivative Instruments on the Consolidated Balance Sheets, Statements of Changes in Shareholders' Equity and Statements of Income

Derivative instruments had the following effects on our Consolidated Balance Sheets, Statements of Changes in Shareholders' Equity and Statements of Income, net of tax, during the fiscal years ended October 31, 2019, 2018, and 2017 (in thousands):

	Amount of Gain (Loss) Recognized in Other Comprehensive Income (Loss)			Location of Gain (Loss) Reclassified From Other Comprehensive Income (Loss)	Amount of Gain (Loss) Reclassified from Other Comprehensive Income (Loss)		
Derivatives	**2019**	**2018**	**2017**		**2019**	**2018**	**2017**
Designated as Hedging Instruments:							
(Effective Portion)							
Foreign exchange forward contracts							
– Intercompany sales/purchases	$ 615	$ 155	$ (709)	Cost of sales and service	$ 235	$ (1,355)	$ 1,354
– Net Investment	$ 128	$ 136	$ (96)				

We did not recognize any gains or losses as a result of hedges deemed ineffective during fiscal years ended October 31, 2019 and 2018. We recognized a gain of $18,000 during the fiscal year ended October 31, 2017 as a result of contracts closed early that were deemed ineffective for financial reporting and did not qualify as cash flow hedges.

We recognized the following gains and losses in our Consolidated Statements of Income during the fiscal years ended October 31, 2019, 2018, and 2017 on derivative instruments not designated as hedging instruments (in thousands):

Derivatives	Location of Gain (Loss) Recognized in Operations	Amount of Gain (Loss) Recognized in Operations 2019	2018	2017
Not Designated as Hedging Instruments:				
Foreign exchange forward contracts	Other expense, net	$ 514	$ (963)	$ (1,001)

The following table presents the changes in the components of Accumulated other comprehensive loss, net of tax, for the fiscal years ended October 31, 2019 and 2018 (in thousands):

	Foreign Currency Translation	Cash Flow Hedges	Total
Balance, October 31, 2017	$ (7,409)	$ (781)	$ (8,190)
Other comprehensive income (loss) before reclassifications	(3,183)	155	(3,028)
Reclassifications	--	1,355	1,355
Balance, October 31, 2018	$ (10,592)	$ 729	$ (9,863)
Other comprehensive income (loss) before reclassifications	550	615	1,165
Reclassifications	--	(235)	(235)
Balance, October 31, 2019	$ (10,042)	$ 1,109	$ (8,933)

Inventories. Inventories are stated at the lower of cost or net realizable value, with cost determined using the first-in, first-out method. Provisions are made to reduce excess or obsolete inventories to their estimated realizable value.

Property and Equipment. Property and equipment are carried at cost. Depreciation and amortization of assets are provided primarily under the straight-line method over the shorter of the estimated useful lives or the lease terms as follows:

	Number of Years
Land	Indefinite
Building	40
Machines	7 – 10
Shop and office equipment	3 – 7
Building & leasehold improvements	3 – 40

Total depreciation and amortization expense recognized for property and equipment was $2.6 million for fiscal 2019 and $2.5 million for each of the fiscal years ended October 31, 2018 and 2017.

Revenue Recognition. We design, manufacture and sell computerized machine tools. Our computer control systems and software products are primarily sold as integral components of our computerized machine tool products. We also provide machine tool components, automation equipment and solutions for job shops, software options, control upgrades, accessories and replacement parts for our products, as well as customer service, training and applications support.

We adopted Accounting Standards Codification (“ASC”) 606, “Revenue from Contracts with Customers” (“ASC 606”) on November 1, 2018, the start of our 2019 fiscal year, and elected the modified retrospective method as of the date of adoption. Prior to the adoption of ASC 606, our revenues were already recognized in the same manner as that required by ASC 606. Therefore, the adoption of ASC 606 did not have an effect on our beginning retained earnings or our overall financial statements as of and for the twelve months ended October 31, 2019.

We recognize revenues from the sale of machine tools, components and accessories and services, and reflect the consideration to which we expect to be entitled. We record revenues based on a five-step model in accordance with FASB guidance codified in ASC 606. In accordance with ASC 606, we have defined contracts as agreements with our customers and distributors in the form of purchase orders, packing or shipping documents, invoices, and, periodically, verbal requests for components and accessories. For each contract, we identify our performance obligations, which is delivering goods or services, determine the transaction price, allocate the contract transaction price to each of the performance obligations (when applicable), and recognize the revenue when (or as) the performance obligation to the customer is fulfilled. A good or service is transferred when the customer obtains control of that good or service. Our computerized machine tools are general purpose computer-controlled machine tools that are typically used in stand-alone operations. Prior to shipment, we test each machine to ensure the machine’s compliance with standard operating specifications. We deem that the customer obtains control upon delivery of the product and that obtaining control is not contingent upon contractual customer acceptance. Therefore, we recognize revenue from sales of our machine tool systems upon delivery of the product to the customer or distributor, which is normally at the time of shipment.

Depending upon geographic location, after shipment, a machine may be installed at the customer’s facilities by a distributor, independent contractor or by one of our service technicians. In most instances where a machine is sold through a distributor, we have no installation involvement. If sales are direct or through sales agents, we will typically complete the machine installation, which consists of the reassembly of certain parts that were removed for shipping and the re-testing of the machine to ensure that it is performing within the standard specifications. We consider the machine installation process for our three-axis machines to be inconsequential and perfunctory. For our five-axis machines that we install, we estimate the fair value of the installation performance obligation and recognize that installation revenue on a prorata basis over the period of the installation process.

From time to time, and depending upon geographic location, we may provide training or freight services. We consider these services to be perfunctory within the context of the contract, as the value of these services typically does not rise to a material level as a component of the total contract value. Service fees from maintenance contracts are deferred and recognized in earnings on a prorata basis over the term of the contract and are generally sold on a stand-alone basis. Customer discounts and estimated product returns are considered variable consideration and are recorded as a reduction of revenue in the same period that the related sales are recorded. We have reviewed the overall sales transactions for variable consideration and have determined that these amounts are not significant.

Allowance for Doubtful Accounts. The allowance for doubtful accounts is based on our best estimate of probable credit issues and historical experience. We perform credit evaluations of the financial condition of our customers. No collateral is required for sales made on open account terms. Concentrations of credit risk with respect to accounts receivable are limited due to the large number of customers comprising our customer base and their dispersion across many geographic areas. We consider trade accounts receivable to be past due when payment is not made by the due date as specified on the customer invoice, and we charge off uncollectible balances when all reasonable collection efforts have been exhausted.

Product Warranty. Expected future product warranty claims are recorded to expense when the product is sold. Product warranty estimates are established using historical information about the nature, frequency, and average cost of warranty claims. Warranty claims are influenced by factors such as new product introductions, technological developments, the competitive environment, and the costs of component parts. Actual payments for warranty claims could differ from the amounts estimated, requiring adjustments to the liabilities in future periods. See Note 12 of Notes to Consolidated Financial Statements for further discussion of warranties.

Research and Development Costs. The costs associated with research and development programs for new products and significant product improvements, other than software development costs which are eligible for capitalization per FASB guidance, are expensed as incurred and are included in Selling, general and administrative expenses. Research and development expenses totaled $4.4 million, $4.7 million, and $4.2 million, in fiscal 2019, 2018, and 2017, respectively.

Software Development Costs. We sell software products that are essential to our machine tools. Costs incurred to develop computer software products and significant enhancements to software features of existing products to be sold or otherwise marketed are capitalized, after technological feasibility is established. Software development costs are amortized on a straight-line basis over the estimated product life of the related software, which ranges from three to five years. We capitalized costs of $1.8 million in fiscal 2019, $2.3 million in fiscal 2018, and $2.3 million in fiscal 2017 related to software development projects. Amortization expense for software development costs was $1.0 million, $1.1 million, and $1.0 million, for the fiscal years ended October 31, 2019, 2018, and 2017, respectively. Accumulated amortization at October 31, 2019 and 2018 was $19.5 million and $18.5 million, respectively.

Estimated amortization expense for the remaining unamortized software development costs for the fiscal years ending October 31, is as follows (in thousands):

Fiscal Year	Amortization Expense
2020	$ 1,500
2021	1,950
2022	1,900
2023	1,550
2024	1,000

Goodwill and Intangible Assets. Goodwill and indefinite-lived intangibles arising from a business combination are not amortized and charged to expense over time. Instead, goodwill and indefinite-lived intangibles must be reviewed annually for impairment, or more frequently, if circumstances arise indicating potential impairment. This impairment review was most recently completed as of July 31, 2019. For goodwill, if the carrying amount of the reporting unit containing the goodwill exceeds the fair value of that reporting unit, an impairment loss is recognized for that excess, but only to the extent of the goodwill amount allocated to that reporting unit. For indefinite-lived intangible assets, if the carrying amount exceeds the fair value, an impairment loss is recognized in an amount equal to that excess. Intangible assets that are determined to have a finite life are amortized over their estimated useful lives and are also subject to review for impairment, if indicators of impairment are identified. The changes in the carrying amounts of goodwill for the fiscal year ended October 31, 2019 were as follows (in thousands):

Balance as of October 31, 2018	$ 2,377
Goodwill acquired	3,500
Impact of foreign currency translation	(30)
Balance as of October 31, 2019	$ 5,847

There were no impairments recognized with respect to the carrying value of goodwill or intangible assets for the years ended October 31, 2019, 2018 or 2017.

As of October 31, 2019, the balances of intangible assets, other than goodwill, were as follows (in thousands):

	Weighted Average Amortization Period	Gross Intangible Assets	Accumulated Amortization	Net Intangible Assets
Tradenames and trademarks	indefinite	$ 60	$ --	$ 60
Tradenames and trademarks	13 years	408	(114)	294
Customer relationships	15 years	372	(173)	199
Technology	13 years	683	(333)	350
Patents	6 years	2,972	(2,813)	159
Other	8 years	375	(341)	34
Total		$ 4,870	$ (3,774)	$ 1,096

As of October 31, 2018, the balances of intangible assets, other than goodwill, were as follows (in thousands):

	Weighted Average Amortization Period	Gross Intangible Assets	Accumulated Amortization	Net Intangible Assets
Tradenames and trademarks	indefinite	$ 60	$ --	$ 60
Tradenames and trademarks	13 years	238	(98)	140
Customer relationships	15 years	255	(148)	107
Technology	13 years	692	(284)	408
Patents	6 years	2,973	(2,790)	183
Other	8 years	377	(337)	40
Total		$ 4,595	$ (3,657)	$ 938

Intangible asset amortization expense was $117,000, $107,000, and $136,000 for fiscal 2019, 2018 and 2017, respectively. Annual intangible asset amortization expense is estimated to be $132,000 per year for fiscal years 2020 through 2024.

Impairment of Long-Lived Assets. Annually, or when there are indicators of impairment, we evaluate the carrying value of long-lived assets to be held and used, including property and equipment, software development costs and intangible assets, including goodwill, when events or circumstances warrant such a review. The carrying value of a long-lived asset (or group of assets) to be held and used is considered impaired when the anticipated separately identifiable undiscounted cash flows from such an asset (or group of assets) are less than the carrying value of the asset (or group of assets) in accordance with FASB guidance related to accounting for the impairment or disposal of long-lived assets.

Earnings Per Share. Basic earnings per share is calculated by dividing net income by the weighted-average number of common shares actually outstanding during the period. Diluted earnings per share assumes the issuance of additional shares of common stock upon exercise of all outstanding stock options and contingently issuable securities if the effect is dilutive, in accordance with the treasury stock method discussed in FASB guidance on “Earnings Per Share.”

The following table presents a reconciliation of our basic and diluted earnings per share computation:

	Fiscal Year Ended October 31,					
(in thousands, except per share amounts)	2019		2018		2017	
	Basic	**Diluted**	**Basic**	**Diluted**	**Basic**	**Diluted**
Net income	$ 17,495	$ 17,495	$ 21,490	$ 21,490	$ 15,115	$ 15,115
Undistributed earnings allocated to participating shares	(147)	(147)	(132)	(132)	(100)	(100)
Net income applicable to common Shareholders	$ 17,348	$ 17,348	$ 21,358	$ 21,358	$ 15,015	$ 15,015
Weighted average shares outstanding	6,759	6,759	6,700	6,700	6,615	6,615
Stock options and contingently issuable securities	--	56	--	71	--	65
	6,759	6,815	6,700	6,771	6,615	6,680
Income per share	$ 2.57	$ 2.55	$ 3.19	$ 3.15	$ 2.27	$ 2.25

Income Taxes – We account for income taxes and the related accounts under the asset and liability method. Deferred tax assets and liabilities are measured using enacted income tax rates in each jurisdiction in effect for the year in which the temporary differences are expected to be recovered or settled. These deferred tax assets are reduced by a valuation allowance, which is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized. Net deferred tax assets and liabilities are classified as non-current in the consolidated financial statements. Our judgment regarding the realization of deferred tax assets may change due to future profitability and market conditions, changes in U.S. or foreign tax laws and other factors. These changes, if any, may require material adjustments to these deferred tax assets and an accompanying reduction or increase in net income in the period when such determinations are made.

The determination of our provision for income taxes requires judgment, the use of estimates and the interpretation and application of complex federal, state and foreign tax laws. Our provision for income taxes reflects a combination of income earned and taxed at the federal and state level in the U.S., as well as in various foreign jurisdictions.

In addition to the risks to the effective tax rate described above, the future effective tax rate reflected in forward-looking statements is based on currently effective tax laws. Significant changes in those laws could materially affect these estimates.

We operate in multiple jurisdictions through wholly-owned subsidiaries, and our global structure is complex. The estimates of our uncertain tax positions involve judgments and assessment of the potential tax implications. We recognize uncertain tax positions when it is more likely than not that the tax position will be sustained upon examination by relevant taxing authorities, based on the technical merits of the position. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. Our tax positions are subject to audit by taxing authorities across multiple global jurisdictions and the resolution of such audits may span multiple years. Tax law is complex and often subject to varied interpretations, accordingly, the ultimate outcome with respect to taxes we may owe may differ from the amounts recognized.

Stock Compensation. We account for share-based compensation according to FASB guidance relating to share-based payments, which requires the measurement and recognition of compensation expense for all share-based awards made to employees and directors based on estimated fair values on the grant date. This guidance requires that we estimate the fair value of share-based awards on the date of grant and recognize as expense the value of the portion of the award that is ultimately expected to vest over the requisite service period.

Estimates. The preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles requires us to make estimates and assumptions that affect the reported amounts presented and disclosed in our consolidated financial statements. Significant estimates and assumptions in these consolidated financial statements require the exercise of judgment and are used for, but not limited to, allowance for doubtful accounts, estimates of future cash flows and other assumptions associated with goodwill, intangible and long-lived asset impairment tests, useful lives for depreciation and amortization, warranty programs, stock compensation, income taxes and deferred tax valuation allowances, and contingencies. Due to the inherent uncertainty involved in making estimates, actual results reported in future periods may be different from these estimates.

2. BUSINESS OPERATIONS

Nature of Business. We design, manufacture and sell computerized CNC machine tools, computer control systems and software products, machine tool components, automation equipment and solutions for job shops, software options, control upgrades, accessories and replacement parts for our products, as well as customer service and training and applications support, to companies in the metal cutting industry through a worldwide sales, service and distribution network. The machine tool industry is highly cyclical and changes in demand can occur abruptly in the geographic markets we serve. As a result of this cyclicality, we have experienced significant fluctuations in our sales, which, in periods of reduced demand, have adversely affected our results of operations and financial condition.

The end market for our products consists primarily of precision tool, die and mold manufacturers, independent job shops, and specialized short-run production applications within large manufacturing operations. Industries served include: aerospace, defense, medical equipment, energy, automotive/transportation, electronics and computer industries. Our products are sold principally through more than 190 independent agents and distributors throughout the Americas, Europe and Asia. We also have our own direct sales and service organizations in China, France, Germany, India, Italy, Poland, Singapore, Taiwan, the United Kingdom, and certain areas of the United States.

Credit Risk. We sell products to customers located throughout the world. We perform ongoing credit evaluations of customers and generally do not require collateral. Allowances are maintained for potential credit losses. Concentration of credit risk with respect to trade accounts receivable is limited due to the large number of customers and their dispersion across many geographic areas. Although a significant amount of trade receivables are with distributors primarily located in the United States, no single distributor or region represents a significant concentration of credit risk.

Manufacturing Risk. At present, our wholly-owned subsidiaries, Hurco Manufacturing Limited (“HML”), Ningbo Hurco Machine Tool Co., Ltd. (“NHML”) and Milltronics USA, Inc. (“Milltronics”) produce the vast majority of our machine tools for all three brands, Hurco, Milltronics and Takumi. In addition, we manufacture electro-mechanical components and accessories for machine tools through our wholly-owned subsidiary, LCM Precision Technology S.r.l. (“LCM”). HML, NHML, Milltronics and LCM manufacture their products in Taiwan, China, the U.S. and Italy, respectively. Any interruption in manufacturing at any of these locations would have an adverse effect on our financial operating results. Interruption in manufacturing at one of these locations could result from a change in the political environment or a natural disaster, such as trade wars or tariffs, or an earthquake, typhoon, or tsunami. Any interruption with one of our key suppliers may also have an adverse effect on our operating results and our financial condition.

3. INVENTORIES

Inventories as of October 31, 2019 and 2018 are summarized below (in thousands):

	2019	2018
Purchased parts and sub-assemblies	$ 32,074	$ 38,303
Work-in-process	20,901	22,786
Finished goods	95,876	76,520
	$ 148,851	$ 137,609

Finished goods inventory consigned to our distributors and agents throughout the Americas, Europe and Asia was $12.0 million and $9.9 million as of October 31, 2019 and 2018, respectively.

4. ACQUISITION OF BUSINESS

On August 5, 2019, we (through a newly-formed subsidiary, ProCobots, LLC) acquired substantially all of the assets of a U.S.-based automation integration company for approximately $4.4 million. This acquired business provides automation solutions that can be integrated with any machine tool. The purchase price has been preliminarily allocated to the assets acquired and the liabilities assumed based on their fair values, and approximated $4.4 million. The allocation of the opening balance sheet of ProCobots as of August 5, 2019 is as follows (in thousands):

Current assets	$ 349
Property plant and equipment	452
Intangibles	148
Goodwill	3,500
Total assets	4,449
Current liabilities	96
Total liabilities	96
Total purchase price and cash expended	$ 4,353

The acquisition was accounted for in accordance with ASC Topic 805, Business Combinations. Accordingly, the total purchase price was allocated to tangible assets and liabilities based on their fair value and the intangibles and goodwill were allocated on a provisional basis at the date of acquisition. These allocations reflected various provisional estimates that were available at the time and are subject to change during the purchase price allocation period as valuations are in the process of being finalized.

The results of operations of ProCobots have been included in the consolidated financial statements from the date of acquisition.

5. CREDIT AGREEMENTS AND BORROWINGS

On December 7, 2012, we entered into a credit agreement, which was subsequently amended on May 9, 2014, June 5, 2014, December 5, 2014 and December 6, 2016 (as amended, the "2012 Credit Agreement") with JP Morgan Chase Bank, N.A that provided us with an unsecured revolving credit and letter of credit facility. The 2012 Credit Agreement terminated on its scheduled maturity date of December 31, 2018.

On December 31, 2018, we and our subsidiary Hurco B.V. entered into a new credit agreement (the "2018 Credit Agreement") with Bank of America, N.A., as the lender. The 2018 Credit Agreement replaced the 2012 Credit Agreement. The 2018 Credit Agreement provides for an unsecured revolving credit and letter of credit facility in a maximum aggregate amount of $40.0 million. The 2018 Credit Agreement provides that the maximum amount of outstanding letters of credit at any one time may not exceed $10.0 million, the maximum amount of outstanding loans made to our subsidiary Hurco B.V. at any one time may not exceed $20.0 million, and the maximum amount of all outstanding loans denominated in alternative currencies at any one time may not exceed $20.0 million. Under the 2018 Credit Agreement, we and Hurco B.V. are borrowers, and certain of our other subsidiaries are guarantors. The scheduled maturity date of the 2018 Credit Agreement is December 31, 2020.

Borrowings under the 2018 Credit Agreement bear interest at floating rates based on, at our option, either (i) a LIBOR-based rate, or other alternative currency-based rate approved by the lender, plus 0.75% per annum, or (ii) a base rate (which is the highest of (a) the federal funds rate plus 0.50%, (b) the prime rate or (c) the one month LIBOR-based rate plus 1.00%), plus 0.00% per annum. Outstanding letters of credit will carry an annual rate of 0.75%.

The 2018 Credit Agreement contains customary affirmative and negative covenants and events of default, including covenants (1) restricting us from making certain investments, loans, advances and acquisitions (but permitting us to make investments in subsidiaries of up to $10.0 million); (2) restricting us from making certain payments, including cash dividends, except that we may pay cash dividends as long as immediately before and after giving effect to such payment, the sum of the unused amount of the commitments under the 2018 Credit Agreement plus our cash on hand is not less than $10.0 million, and as long as we are not in default before and after giving effect to such dividend payments; (3) requiring that we maintain a minimum working capital of $125.0 million; and (4) requiring that we maintain a minimum tangible net worth of $170.0 million. We may use the proceeds from advances under the 2018 Credit Agreement for general corporate purposes.

In December 2018, in connection with our entry into the 2018 Credit Agreement, (1) using cash on hand, we repaid in full the $1.4 million outstanding under, and terminated, our credit facility in China and (2) we terminated our United Kingdom credit facility. In March 2019, our wholly-owned subsidiaries in Taiwan, HML, and China, NHML, closed on uncommitted revolving credit facilities with maximum aggregate amounts of 150 million New Taiwan Dollars (the “Taiwan credit facility”) and 32.5 million Chinese Yuan (the “China credit facility”), respectively. Both the Taiwan and China credit facilities have a final maturity date of March 5, 2020.

As a result, as of October 31, 2019, our existing credit facilities consist of our €1.5 million revolving credit facility in Germany, the 150 million New Taiwan Dollars Taiwan credit facility, the 32.5 million Chinese Yuan China credit facility and the $40.0 million revolving credit facility under the 2018 Credit Agreement.

As of October 31, 2019, there were no borrowings under any of our credit facilities and there was $51.2 million of available borrowing capacity thereunder.

6. FINANCIAL INSTRUMENTS

Estimated Fair Value of Financial Instruments

FASB fair value guidance establishes a three-tier fair value hierarchy, which categorizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs, such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The carrying amounts for cash and cash equivalents approximate their fair values due to the short maturity of these instruments, and such instruments meet the Level 1 criteria of the three-tier fair value hierarchy discussed above. The carrying amount of short-term debt approximates fair value due to the variable rate of the interest and the short term nature of the instrument.

In accordance with this guidance, the following table represents the fair value hierarchy for our financial assets and liabilities measured at fair value as of October 31, 2019 and 2018 (in thousands):

	Assets		Liabilities	
	October 31, 2019	October 31, 2018	October 31, 2019	October 31, 2018
Level 1				
Deferred compensation	$ 1,991	$ 1,723	$ --	$ --
Level 2				
Derivatives	$ 1,391	$ 3,085	$ 388	$ 2,020

Recurring Fair Value Measurements

Included in Level 1 assets are mutual fund investments under a nonqualified deferred compensation plan. We estimate the fair value of these investments on a recurring basis using market prices which are readily available.

Included as Level 2 fair value measurements are derivative assets and liabilities related to gains and losses on foreign currency forward exchange contracts entered into with a third party. We estimate the fair value of these derivatives on a recurring basis using foreign currency exchange rates obtained from active markets. Derivative instruments are reported in the accompanying consolidated financial statements at fair value. We have derivative financial instruments in the form of foreign currency forward exchange contracts as described in Note 1 of Notes to Consolidated Financial Statements in which the U.S. Dollar equivalent notional amount of these contracts was $108.6 million and $145.2 million at October 31, 2019 and 2018, respectively.

The fair value of the foreign currency forward exchange contracts and the related currency positions are subject to offsetting market risk resulting from foreign currency exchange rate volatility. The counterparty to the forward exchange contract is a substantial and creditworthy financial institution. We do not consider either the risk of counterparty non-performance or the economic consequences of counterparty non-performance as material risks.

7. INCOME TAXES

In December 2017, the U.S. Tax Cuts and Jobs Act (the “Tax Reform Act”) was enacted. The Tax Reform Act significantly revised the U.S. corporate income tax regime by, among other things, lowering the U.S. corporate tax rate from 35% to 21% effective January 1, 2018, and implementing a modified territorial tax system from a global system by adding provisions related to Global Intangible Low Taxed Income (“GILTI”) and Foreign-derived Intangible Income (”FDII”) among other provisions. The GILTI and FDII provisions under the Tax Reform Act became effective for the Company in fiscal 2019. The Tax Reform Act also imposed a one-time transition tax on deemed repatriation of historical earnings of foreign subsidiaries, which was recorded in fiscal 2018. In December 2017, the United States Securities and Exchange Commission (“SEC”) issued Staff Accounting Bulletin No. 118 (“SAB 118”), which provides guidance on accounting for the tax effects of the Tax Reform Act.

The Tax Reform Act created a new requirement that GILTI income earned by Controlled Foreign Corporations (“CFC’s”) must be included in the gross income of the CFC’s U.S. shareholder effective for us in fiscal 2019 for the Company. Under U.S. Generally Accepted Accounting Principles, we are allowed to make an accounting policy choice of either (1) treating taxes due on U.S. inclusions in taxable income related to GILTI as a current period expense when incurred (the “period cost method”) or (2) factoring such amounts into the Company’s measurement of its deferred taxes (the “deferred method”). We have elected the period cost method to account for GILTI tax.

The Tax Reform Act also created FDII for US companies that derive income from the export of tangible and intangible property and services effective for us in fiscal 2019. We have recorded a deduction attributable to FDII based on our current operations.

In the fiscal years set forth below, the provision for income taxes consisted of the following (in thousands):

	Year Ended October 31,		
	2019	**2018**	**2017**
Current:			
U.S. taxes	$ 1,854	$ 6,333	$ 308
Foreign taxes	3,715	5,203	4,185
	5,569	11,536	4,493
Deferred:			
U.S. taxes	(31)	(326)	1,236
Foreign taxes	291	(204)	(128)
	260	(530)	1,108
	$ 5,829	$ 11,006	$ 5,601

A comparison of income tax expense at the U.S. statutory rate to the Company’s effective tax rate is as follows (dollars in thousands):

	Year Ended October 31,		
	2019	**2018**	**2017**
Income before income taxes:			
Domestic	$ 9,793	$ 14,101	$ 5,477
Foreign	13,531	18,395	15,239
	$ 23,324	$ 32,496	$ 20,716
Tax rates:			
U.S. statutory rate	21%	23%	34%
Effect of tax rate of international jurisdictions different than U.S. statutory rates	4%	2%	(5)%
Valuation allowance	1%	0%	1%
State taxes	1%	0%	0%
Tax Credits	(2)%	(1)%	(3)%
Effect of Tax Rate Changes	0%	4%	0%
Transition Tax	(1)%	7%	0%
US tax on distributed and undistributed earnings	3%	0%	0%
US benefit of foreign intangible income	(3)%	0%	0%
Other	1%	(1)%	0%
Effective tax rate	25%	34%	27%

The Tax Reform Act also made comprehensive changes to U.S. federal income tax laws by moving from a global to a modified territorial tax regime. As a result, cash repatriated to the U.S. is generally no longer subject to U.S federal income tax. At October 31, 2019, undistributed earnings of our foreign subsidiaries are expected to be permanently reinvested. Accordingly, we have not provided for any withholding taxes on the undistributed earnings of our foreign subsidiaries since January 1, 2018.

Deferred income taxes are determined based on the difference between the amounts used for financial reporting purposes and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred taxes are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. Net deferred tax assets and liabilities are classified as non-current in the consolidated financial statements.

As of October 31, 2019, we had deferred tax assets established for accumulated net operating loss carryforwards of $1.4 million, primarily related to certain states in the U.S. and foreign jurisdictions. We also had deferred tax assets for research and development tax credits of $0.8 million. We have established a valuation allowance against some of these carryforwards due to the uncertainty of their full realization. As of October 31, 2019 and 2018, the balance of this valuation allowance was $2.2 million and $2.1 million, respectively.

Significant components of our deferred tax assets and liabilities at October 31, 2019 and 2018 are as follows (in thousands):

	October 31,	
	2019	**2018**
Deferred Tax Assets:		
Accrued inventory reserves	$ 1,224	$ 1,325
Accrued warranty expenses	363	499
Compensation related expenses	2,723	2,644
Unrealized exchange gain/loss	143	159
Other accrued expenses	170	170
Net operating loss carryforwards	1,380	1,316
Other credit carryforwards	766	686
Other	293	350
	7,062	7,149
Less: Valuation allowance - net operating loss and other credit carryforwards	(2,227)	(2,106)
Deferred tax assets	4,835	5,043
Deferred Tax Liabilities:		
Net derivative instruments	(313)	(208)
Property and equipment and capitalized software development costs	(2,632)	(2,370)
Other	(204)	(231)
Net deferred tax assets	$ 1,686	$ 2,234

As of October 31, 2019, we had net operating losses carryforwards for international and U.S. income tax purposes of $5.9 million, of which $5.2 million related to foreign jurisdictions will expire within 5 years beginning in fiscal 2020 and $0.7 million will expire between 5 and 20 years. We also had tax credits of $765,000 that will expire between years 2023 and 2030.

A reconciliation of the beginning and ending amount of unrecognized tax benefits, excluding the related accrual for interest or penalties, is as follows (in thousands):

	2019	2018	2017
Balance, beginning of year	$ 180	$ 1,101	$ 1,102
Additions based on tax positions related to the current year	36	37	37
Additions (reductions) related to prior year tax positions	--	(945)	(20)
Reductions due to statute expiration	(23)	(18)	(74)
Other	--	5	56
Balance, end of year	$ 193	$ 180	$ 1,101

The entire balance of the unrecognized tax benefits and related interest at October 31, 2019, if recognized, could affect the effective tax rate in future periods.

We recognize accrued interest and penalties related to unrecognized tax benefits as components of our income tax provision. As of October 31, 2019, the amount of interest accrued, reported in other liabilities, was approximately $32,000, which did not include the federal tax benefit of interest deductions. The statute of limitations with respect to unrecognized tax benefits will expire between July 2020 and August 2023.
We file U.S. federal and state income tax returns, as well as tax returns in several foreign jurisdictions. A summary of open tax years by major jurisdiction is presented below:

United States federal	Fiscal 2016 through the current period
Germany[1]	Fiscal 2017 through the current period
Taiwan	Fiscal 2017 through the current period

[1] Includes federal as well as state, provincial or similar local jurisdictions, as applicable.

8. EMPLOYEE BENEFITS

We have defined contribution plans that include a majority of our employees, under which our matching contributions are primarily discretionary. The purpose of these plans is generally to provide additional financial security during retirement by providing employees with an incentive to save throughout their employment. Our contributions and related expense totaled $1.4 million, $1.2 million, $1.1 million, for the fiscal years ended October 31, 2019, 2018, and 2017, respectively.

9. STOCK-BASED COMPENSATION

In March 2016, we adopted the Hurco Companies, Inc. 2016 Equity Incentive Plan (the “2016 Equity Plan”), which allows us to grant awards of stock options, stock appreciation rights, restricted stock, stock units and other stock-based awards. The 2016 Equity Plan replaced the Hurco Companies, Inc. 2008 Equity Incentive Plan (the “2008 Plan”) and is the only active plan under which equity awards may be made by us to our employees and non-employee directors. No further awards will be made under our 2008 Plan. The total number of shares of our common stock that may be issued pursuant to awards under the 2016 Equity Plan is 856,048, which includes 386,048 shares remaining available for future grants under the 2008 Plan as of March 10, 2016, the date our shareholders approved the 2016 Equity Plan.

The Compensation Committee of our Board of Directors has the authority to determine the officers, directors and key employees who will be granted awards under the 2016 Equity Plan; designate the number of shares subject to each award; determine the terms and conditions upon which awards will be granted; and prescribe the form and terms of award agreements. We have granted restricted shares and performance units under the 2016 Equity Plan that are currently outstanding, and we have granted stock options under the 2008 Plan that are currently outstanding. No stock option may be exercised more than ten years after the date of grant or such shorter period as the Compensation Committee may determine at the date of grant. The market value of a share of our common stock, for purposes of the 2016 Equity Plan, is the closing sale price as reported by the Nasdaq Global Select Market on the date in question or, if not a trading day, on the last preceding trading date.

A summary of the status of the options as of October 31, 2019, 2018 and 2017 and the related activity for the year is as follows:

	Shares Under Option	Weighted Average Grant Date Fair Value
Balance October 31, 2016	107,889	$ 20.25
Granted	--	--
Cancelled	--	--
Expired	--	--
Exercised	(29,164)	$ 18.31
Balance October 31, 2017	78,725	$ 20.97
Granted	--	--
Cancelled	--	--
Expired	--	--
Exercised	(41,680)	$ 20.33
Balance October 31, 2018	37,045	$ 21.69
Granted	--	--
Cancelled	--	--
Expired	--	--
Exercised	--	--
Balance October 31, 2019	37,045	$ 21.69

The total intrinsic value of stock options exercised during the twelve months ended October 31, 2019, 2018 and 2017 was approximately $0, $847,000 and $771,000, respectively.

As of October 31, 2019, the total intrinsic value of stock options that are outstanding and exercisable was $485,000. Stock options outstanding and exercisable on October 31, 2019, were as follows:

Range of Exercise Prices Per Share	Shares Under Option	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life in Years
Outstanding and Exercisable			
18.13	3,738	18.13	0.5
21.45	21,748	21.45	2.1
23.30	11,559	23.30	3.1
$ 18.13 – 23.30	37,045	$ 21.69	2.3

On March 14, 2019, the Compensation Committee granted a total of 11,824 shares of time-based restricted stock to our non-employee directors. The restricted shares vest in full one year from the date of grant provided the recipient remains on the board of directors through that date. The grant date fair value of the restricted shares was based on the closing sales price of our common stock on the grant date, which was $40.58 per share.

On January 2, 2019, the Compensation Committee determined the degree to which the long-term incentive compensation arrangement approved for the fiscal 2016-2018 performance period was attained, and the resulting payout level relative to the target amount for each of the metrics that were established by the Compensation Committee in 2016. As a result, the Compensation Committee determined that a total of 32,559 performance shares were earned by our executive officers, which performance shares vested on January 2, 2019. The vesting date fair value of the performance shares was based on the closing sales price of our common stock on the vesting date, which was $36.08 per share.

On January 2, 2019, the Compensation Committee also approved a long-term incentive compensation arrangement for our executive officers in the form of restricted shares and performance stock units (“PSUs”) under the 2016 Equity Plan, which will be payable in shares of our common stock if earned and vested. The awards were approximately 25% time-based vesting and approximately 75% performance-based vesting. The three-year performance period for the PSUs is fiscal 2019 through fiscal 2021.

On that date, the Compensation Committee granted a total of 21,825 shares of time-based restricted stock to our executive officers. The restricted shares vest in thirds over three years from the date of grant provided the recipient remains employed through that date. The grant date fair value of the restricted shares was based upon the closing sales price of our common stock on the date of grant, which was $36.08 per share.

On January 2, 2019, the Compensation Committee also granted a total target number of 30,943 PSUs to our executive officers designated as “PSU – TSR”. These PSUs were weighted as approximately 40% of the overall 2019 executive long-term incentive compensation arrangement and will vest and be paid based upon the total shareholder return of our common stock over the three-year period of fiscal 2019-2021, relative to the total shareholder return of the companies in a specified peer group over that period. Participants will have the ability to earn between 50% of the target number of the PSUs – TSR for achieving threshold performance and 200% of the target number of the PSUs – TSR for achieving maximum performance. The grant date fair value of the PSUs – TSR was $40.72 per PSU and was calculated using the Monte Carlo approach.

On January 2, 2019, the Compensation Committee also granted a total target number of 30,557 PSUs to our executive officers designated as “PSU – ROIC”. These PSUs were weighted as approximately 35% of the overall 2019 executive long-term incentive compensation arrangement and will vest and be paid based upon the achievement of pre-established goals related to our average return on invested capital over the three-year period of fiscal 2019-2021. Participants will have the ability to earn between 50% of the target number of the PSUs - ROIC for achieving threshold performance and 200% of the target number of the PSUs - ROIC for achieving maximum performance. The grant date fair value of the PSUs – ROIC was based on the closing sales price of our common stock on the grant date, which was $36.08 per share.

On November 14, 2018, the Compensation Committee granted a total of 7,200 shares of time-based restricted stock to our non-executive employees. The restricted shares vest in thirds over three years from the date of grant provided the recipient remains employed through that date. The grant date fair value of the restricted shares was based upon the closing sales price of our common stock on the date of grant, which was $40.01 per share.

On March 15, 2018, the Compensation Committee granted a total of 9,114 shares of time–based restricted stock to our non–employee directors. The restricted shares vest in full one year from the date of grant provided the recipient remains on the board of directors through that date. The grant date fair value of the restricted shares was based on the closing sales price of our common stock on the grant date, which was $46.05 per share.

On January 3, 2018, the Compensation Committee determined the degree to which the long–term incentive compensation arrangement approved for the fiscal 2015–2017 performance period was attained, and the resulting payout level relative to the target amount for each of the metrics that were established by the Compensation Committee in 2015. As a result, the Compensation Committee determined that a total of 23,299 performance shares were earned by our executive officers, which performance shares vested on January 3, 2018. The vesting date fair value of the performance shares was based on the closing sales price of our common stock on the vesting date, which was $42.20 per share. All related stock–based compensation cost for these vested performance shares was expensed accordingly during the three–year performance period ended October 31, 2017.

On January 3, 2018, the Compensation Committee also approved a long–term incentive compensation arrangement for our executive officers in the form of restricted shares and PSUs under the 2016 Equity Plan, which will be payable in shares of our common stock if earned and vested. The awards were 25% time–based vesting and 75% performance–based vesting. The three–year performance period for the PSUs is fiscal 2018 through fiscal 2020.

On that date, the Compensation Committee granted a total of 14,810 shares of time–based restricted stock to our executive officers. The restricted shares vest in thirds over three years from the date of grant provided the recipient remains employed through that date. The grant date fair value of the restricted shares was based upon the closing sales price of our common stock on the date of grant, which was $42.20 per share.

On January 3, 2018, the Compensation Committee also granted a total target number of 21,891 PSUs to our executive officers designated as “PSU – TSR”. These PSUs were weighted as approximately 40% of the overall 2018 executive long–term incentive compensation arrangement and will vest and be paid based upon the total shareholder return of our common stock over the three–year period of fiscal 2018–2020, relative to the total shareholder return of the companies in a specified peer group over that period. Participants will have the ability to earn between 50% of the target number of the PSUs – TSR for achieving threshold performance and 200% of the target number of the PSUs – TSR for achieving maximum performance. The grant date fair value of the PSUs – TSR was $45.68 per PSU and was calculated using the Monte Carlo approach.

On January 3, 2018, the Compensation Committee also granted a total target number of 20,734 PSUs to our executive officers designated as “PSU – ROIC”. These PSUs were weighted as approximately 35% of the overall 2018 executive long–term incentive compensation arrangement and will vest and be paid based upon the achievement of pre–established goals related to our average return on invested capital over the three–year period of fiscal 2018–2020. Participants will have the ability to earn between 50% of the target number of the PSUs –ROIC for achieving threshold performance and 200% of the target number of the PSUs – ROIC for achieving maximum performance. The grant date fair value of the PSUs – ROIC was based on the closing sales price of our common stock on the grant date, which was $42.20 per share.

On November 15, 2017, the Compensation Committee granted a total of 2,364 shares of time–based restricted stock to our non–executive employees. The restricted shares vest in thirds over three years from the date of grant provided the recipient remains employed through that date. The grant date fair value of the restricted shares was based upon the closing sales price of our common stock on the date of grant, which was $42.30 per share.

On March 9, 2017, the Compensation Committee granted a total of 14,920 shares of time–based restricted stock to our non–employee directors. The restricted shares vest in full one year from the date of grant provided the recipient remains on the board of directors through that date. The grant date fair value of the restricted shares was based on the closing sales price of our common stock on the grant date, which was $26.80 per share.

On January 5, 2017, the Compensation Committee determined the degree to which the long–term incentive compensation arrangement approved for the fiscal 2014–2016 performance period was attained, and the resulting payout level relative to the target amount for each of the metrics that were established by the Compensation Committee in 2014. As a result, the Compensation Committee determined that a total of 30,683 performance shares were earned by our executive officers, which performance shares vested on January 5, 2017. The vesting date fair value of the performance shares was based on the closing sales price of our common stock on the vesting date, which was $33.90 per share. All related stock–based compensation cost for these vested performance shares was expensed accordingly during the three–year performance period ended October 31, 2016.

On January 5, 2017, the Compensation Committee also approved a long–term incentive compensation arrangement for our executive officers in the form of restricted shares and PSUs under the 2016 Equity Plan, which will be payable in shares of our common stock if earned and vested. The awards were 25% time–based vesting and 75% performance–based vesting. The three–year performance period for the PSUs is fiscal 2017 through fiscal 2019.

On that date, the Compensation Committee granted a total of 14,747 shares of time–based restricted stock to our executive officers. The restricted shares vest in thirds over three years from the date of grant provided the recipient remains employed through that date. The grant date fair value of the restricted shares was based upon the closing sales price of our common stock on the date of grant, which was $33.90 per share.

On January 5, 2017, the Compensation Committee also granted a total target number of 18,496 PSUs to our executive officers designated as "PSU – TSR". These PSUs were weighted as approximately 40% of the overall 2017 executive long–term incentive compensation arrangement and will vest and be paid based upon the total shareholder return of our common stock over the three–year period of fiscal 2017–2019, relative to the total shareholder return of the companies in a specified peer group over that period. Participants will have the ability to earn between 50% of the target number of the PSUs – TSR for achieving threshold performance and 200% of the target number of the PSUs – TSR for achieving maximum performance. The grant date fair value of the PSUs – TSR was $43.25 per PSU and was calculated using the Monte Carlo approach.

On January 5, 2017, the Compensation Committee also granted a total target number of 20,647 PSUs to our executive officers designated as "PSU – ROIC". These PSUs were weighted as approximately 35% of the overall 2017 executive long–term incentive compensation arrangement and will vest and be paid based upon the achievement of pre–established goals related to our average return on invested capital over the three–year period of fiscal 2017–2019. Participants will have the ability to earn between 50% of the target number of the PSUs – ROIC for achieving threshold performance and 200% of the target number of the PSUs – ROIC for achieving maximum performance. The grant date fair value of the PSUs – ROIC was based on the closing sales price of our common stock on the grant date, which was $33.90 per share.

A reconciliation of our restricted stock, performance share and PSU activity and related information is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at October 31, 2018	168,348	$ 37.24
Shares or units granted	102,349	38.28
Shares or units vested	(44,077)	33.29
Shares or units cancelled	(12,462)	29.82
Shares withheld	(13,676)	29.67
Unvested at October 31, 2019	200,482	$ 39.62

During fiscal 2019, 2018, and 2017, we recorded approximately $2.7 million, $2.5 million, and $1.7 million, respectively, of stock–based compensation expense related to grants under the 2008 Plan and the 2016 Equity Plan. As of October 31, 2019, there was an estimated $3.2 million of total unrecognized stock–based compensation cost that we expect to recognize by the end of the first quarter of fiscal 2022.

10. RELATED PARTY TRANSACTIONS

As of October 31, 2019, we owned approximately 35% of the outstanding shares of a Taiwanese-based contract manufacturer, Hurco Automation, Ltd. (“HAL”). HAL’s scope of activities includes the design, manufacture, sales and distribution of industrial automation products, software systems and related components, including control systems and components produced under contract for sale exclusively to us. We are accounting for this investment using the equity method. The investment of $4.2 million and $4.0 million at October 31, 2019 and 2018, respectively, is included in Investments and other assets, net on the Consolidated Balance Sheets. Purchases of controls from HAL amounted to $8.5 million, $11.3 million and $10.0 million in fiscal 2019, 2018 and 2017, respectively. Sales of control component parts to HAL were $198,000, $197,000 and $139,000 for the fiscal years ended October 31, 2019, 2018 and 2017, respectively. Trade payables to HAL were $938,000 and $3.4 million at October 31, 2019 and 2018, respectively. Trade receivables from HAL were $22,000 and $68,000 at October 31, 2019 and 2018, respectively.

Summary unaudited financial information for HAL’s operations and financial condition is as follows (in thousands):

	2019	2018	2017
Net Sales	$ 15,957	$ 17,841	$ 15,800
Gross Profit	2,322	2,944	2,457
Operating Income	992	1,534	1,037
Net Income	1,490	1,845	1,320
Current Assets	$ 12,019	$ 12,870	$ 11,310
Non-current Assets	5,560	4,579	4,440
Current Liabilities	3,674	4,666	3,916

11. CONTINGENCIES AND LITIGATION

From time to time, we are involved in various claims and lawsuits arising in the normal course of business. Pursuant to applicable accounting rules, we accrue the minimum liability for each known claim when the estimated outcome is a range of possible loss and no one amount within that range is more likely than another. We maintain insurance policies for such matters, and we record insurance recoveries when we determine such recovery to be probable. We do not expect any of these claims, individually or in the aggregate, to have a material adverse effect on our consolidated financial position or results of operations. We believe that the ultimate resolution of claims for any losses will not exceed our insurance policy coverages.

12. GUARANTEES AND PRODUCT WARRANTIES

From time to time, our subsidiaries guarantee third party payment obligations in connection with the sale of machines to customers that use financing. We follow FASB guidance for accounting for guarantees (codified in ASC 460). As of October 31, 2019, we had 21 outstanding third party payment guarantees totaling approximately $0.5 million. The terms of these guarantees are consistent with the underlying customer financing terms. Upon shipment of a machine, the customer assumes the risk of ownership. The customer does not obtain title, however, until it has paid for the machine. A retention of title clause allows us to recover the machine if the customer defaults on the financing. We accrue liabilities under these guarantees at fair value, which amounts are insignificant.

We provide warranties on our products with respect to defects in material and workmanship. The terms of these warranties are generally one year for machines and shorter periods for service parts. We recognize a reserve with respect to this obligation at the time of product sale, with subsequent warranty claims recorded against the reserve. The amount of the warranty reserve is determined based on historical trend experience and any known warranty issues that could cause future warranty costs to differ from historical experience. A reconciliation of the changes in our warranty reserve is as follows (in thousands):

	2019	2018	2017
Balance, beginning of year	$ 2,497	$ 1,772	$ 1,523
Provision for warranties during the year	2,246	4,121	3,379
Charges to the accrual	(2,991)	(3,326)	(3,203)
Impact of foreign currency translation	8	(70)	73
Balance, end of year	$ 1,760	$ 2,497	$ 1,772

The decrease in our warranty reserve from fiscal 2018 to fiscal 2019 was primarily due to a decrease in the number of machines under warranty resulting from decreased sales volume. The increase in our warranty reserve from fiscal 2017 to fiscal 2018 was primarily due to an increase in the number of machines under warranty resulting from increased sales volume.

13. OPERATING LEASES

We lease facilities, certain equipment and vehicles under operating leases that expire at various dates through 2029. Future payments required under operating leases as of October 31, 2019, are summarized as follows (in thousands):

2020	$ 4,015
2021	3,149
2022	2,224
2023	1,482
2024 and thereafter	2,531
Total	$ 13,401

Lease expense for the fiscal years ended October 31, 2019, 2018, and 2017 was $5.1 million, $4.5 million, and $4.4 million, respectively.

14. QUARTERLY FINANCIAL INFORMATION (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2019 (In thousands, except per share data)				
Sales and service fees	$ 74,213	$ 70,674	$ 58,501	$ 59,989
Gross profit	22,142	21,637	17,189	16,240
Gross profit margin	30%	31%	29%	27%
Selling, general and administrative expenses	13,914	14,111	12,592	14,051
Operating income	8,228	7,526	4,597	2,189
Provision for income taxes	2,453	2,481	1,155	(260)
Net income	6,654	5,252	3,491	2,098
Income per common share – basic	$ 0.98	$ 0.77	$ 0.51	$ 0.31
Income per common share – diluted	$ 0.97	$ 0.76	$ 0.51	$ 0.31

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2018 (In thousands, except per share data)				
Sales and service fees	$ 68,444	$ 70,424	$ 78,752	$ 83,051
Gross profit	20,121	19,313	24,521	27,851
Gross profit margin	29%	27%	31%	34%
Selling, general and administrative expenses	12,966	13,320	15,160	16,564
Operating income	7,155	5,993	9,361	11,287
Provision for income taxes	4,500	1,656	2,511	2,339
Net income	2,937	3,751	6,500	8,302
Income per common share – basic	$ 0.44	$ 0.55	$ 0.96	$ 1.24
Income per common share – diluted	$ 0.43	$ 0.55	$ 0.95	$ 1.22

15. SEGMENT INFORMATION

We operate in a single segment: industrial automation equipment. We design, manufacture and sell computerized (i.e., Computer Numeric Control) machine tools, consisting primarily of vertical machining centers (mills) and turning centers (lathes), to companies in the metal cutting industry through a worldwide sales, service and distribution network. Although the majority of our computer control systems and software products are proprietary, they predominantly use industry standard personal computer components. Our computer control systems and software products are primarily sold as integral components of our computerized machine tool products. We also provide machine tool components, automation equipment and solutions for job shops, software options, control upgrades, accessories and replacement parts for our products, as well as customer service and training and applications support.

We principally sell our products through more than 190 independent agents and distributors throughout the Americas, Europe and Asia. Our line is the primary line for the majority of our distributors globally even though some may carry competitive products. We also have our own direct sales and service organizations in China, France, Germany, India, Italy, Poland, Singapore, Taiwan, the United Kingdom, and certain areas of the United States, which are among the world's principal machine tool consuming countries. During fiscal 2019, no distributor accounted for more than 5% of our sales and service fees. In fiscal 2019, approximately 64% of our revenues were from customers located outside of the U.S., including customers located in Canada, Mexico and Central and South America, and no single end-user of our products accounted for more than 5% of our total sales and service fees.

The following table sets forth the contribution of each of our product groups and services to our total sales and service fees during each of the past three fiscal years (in thousands):

Net Sales and Service Fees by Product Category

	Year ended October 31,		
	2019	2018	2017
Computerized Machine Tools	$ 223,735	$ 261,710	$ 209,311
Computer Control Systems and Software †	2,818	2,870	2,324
Service Parts	27,854	27,501	24,255
Service Fees	8,970	8,590	7,777
Total	$ 263,377	$ 300,671	$ 243,667

† Amounts shown do not include computer control systems and software sold as an integrated component of computerized machine systems.

The following table sets forth revenues by geographic area, based on customer location, for each of the past three fiscal years (in thousands):

Revenues by Geographic Area

	Year Ended October 31,		
	2019	2018	2017
United States of America	$ 95,196	$ 87,231	$ 70,912
Canada	2,580	2,915	3,801
Central & South Americas	1,409	2,194	1,844
Total Americas	99,185	92,340	76,557
Germany	52,002	62,346	48,786
United Kingdom	29,349	34,216	28,019
Italy	14,772	16,691	13,416
France	14,346	15,815	13,917
Other Europe	20,028	32,034	27,583
Total Europe	130,497	161,102	131,721
China	15,706	27,748	22,456
Other Asia Pacific	16,858	17,937	10,238
Total Asia Pacific	32,564	45,685	32,694
Other Foreign	1,131	1,544	2,695
Grand Total	$ 263,377	$ 300,671	$ 243,667

Long-lived tangible assets, net by geographic area, were (in thousands):

	As of October 31,		
	2019	2018	2017
United States of America	$ 7,967	$ 8,375	$ 7,599
Foreign countries	8,006	6,617	6,185
	$ 15,973	$ 14,992	$ 13,784

Net assets by geographic area were (in thousands):

	As of October 31,		
	2019	2018	2017
Americas	$ 103,863	$ 96,348	$ 86,432
Europe	71,411	74,558	70,536
Asia Pacific	64,971	51,947	46,117
	$ 240,245	$ 222,853	$ 203,085

16. NEW ACCOUNTING PRONOUNCEMENTS

Recently Adopted Accounting Pronouncements:

Between May 2014 and December 2016, FASB issued Accounting Standards Update (“ASU”) No. 2014–09, *Revenue from Contracts with Customers (Topic 606)*, and various related updates, establishing a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. This standard provides a five–step analysis in determining when and how revenue is recognized. The new model requires revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration a company expects to receive in exchange for those goods or services and supersedes most of the prior revenue recognition guidance, including industry specific guidance. We had the option of applying this new standard retrospectively to each prior period presented (“full retrospective approach”) or retrospectively with the cumulative effect recognized in retained earnings as of the date of adoption (“modified retrospective approach”). Topic 606 was effective for us beginning November 1, 2018 and we adopted it on that date using the modified retrospective approach. Prior to the adoption of ASC 606, our revenues were already recognized in the same manner as that required by ASC 606. Therefore, the adoption of ASC 606 did not have an effect on our beginning retained earnings or our overall financial statements as of and for the twelve months ended October 31, 2019.

In January 2017, FASB issued ASU No. 2017-04, *Intangibles–Goodwill and Other (Topic 350): Simplifying the Test of Goodwill Impairment*, which eliminates Step 2 from the goodwill impairment test (i.e., the requirement for an entity to calculate the implied fair value of goodwill in measuring a goodwill impairment loss). ASU 2017-04 provides that a company should perform its goodwill impairment test by comparing the fair value of a reporting unit with its carrying value and should recognize an impairment charge if the carrying value exceeds the fair value of the reporting unit, but only to the extent of the goodwill amount allocated to that reporting unit. Companies still have the option to perform a qualitative assessment to determine if the quantitative impairment test is necessary. ASU 2017-04 is effective for our fiscal year 2021, including interim periods within the fiscal year. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates on or after January 1, 2017. We early adopted this standard in the fourth quarter of fiscal 2019. This standard did not have a significant effect on our accounting policies or on our consolidated financial statements and related disclosures.

Between February 2016 and February 2019, FASB issued ASU No. 2016-02, *Leases (Topic 842)*, and various related updates, which establish a comprehensive new lease accounting model. Topic 842 clarifies the definition of a lease, requires a dual approach to lease classification similar to current lease classifications, and requires lessees to recognize leases on the balance sheet as a lease liability with a corresponding right-of-use asset for leases with a lease-term of more than twelve months. Under Topic 842, the income statement will reflect lease expense for operating leases and amortization/interest expense for financing leases.

Topic 842 is effective for our fiscal year 2020, including interim periods within the fiscal year, and requires modified retrospective application. We adopted Topic 842 on November 1, 2019 utilizing the transition method allowed per ASU 2018-11, and accordingly, comparative period financial information will not be adjusted for the effects of adopting Topic 842. No cumulative-effect adjustment was required to the opening balance of retained earnings on the adoption date. We have substantially completed an assessment of the new standard’s impact and determined the new standards will not have a material impact on our Condensed Consolidated Statements of Income or Cash Flows; however, the estimated impact of adopting Topic 842 will result in the recognition of a right-of-use (“ROU”) asset and lease liability on the Condensed Consolidated Balance Sheets subsequent to October 31, 2019 in the range of approximately $12-14 million, based on the lease portfolio existing as of this date. While the ROU asset will be classified as a noncurrent asset, approximately one-third of the lease liability amount is expected to be classified as a current liability, with the remainder being classified as noncurrent.

We are also in the process of updating our systems, policies, and internal controls over financial reporting related to the adoption of this standard.

Upon adoption of Topic 842, we utilized the following elections and practical expedients:

- We have elected to combine non-lease components with lease components.
- If at the lease commencement date, a lease has a lease term of 12 months or less and does not include a purchase option that is reasonably certain to be exercised, we have elected not to apply Topic 842 recognition requirements. Nonetheless, we intend to include leases of less than 12 months within the updated footnote disclosures, if material.
- We have elected not to use the portfolio method if we enter into a large number of leases in the same month with the same terms and conditions.
- As we have applied the new transition method allowed per ASU 2018-11, we have elected to not reassess arrangements entered into prior to November 1, 2019 for whether an arrangement is or contains a lease, the lease classification applied or to separate initial direct costs.
- We have elected not to use hindsight in determining the lease term for lease contracts that have historically been renewed or amended.

We have no significant lease agreements in place for which we are a lessor, and substantially all of our leases for which we are a lessee are classified as operating leases under the guidance in Topic 840 as of October 31, 2019. As such, due to the practical expedient election to not reassess lease classification, substantially all our leases will continue to be classified as operating leases under Topic 842. When available, we will utilize the rate implicit in the lease as the discount rate to determine the lease liability in accordance with Topic 842. However, if this rate is not available, we will use our incremental borrowing rate as the discount rate, which is the rate, at inception of the lease, we would incur to borrow over a similar term the funds needed to purchase the leased asset.

Our lease portfolio includes leased production and assembly facilities, warehouses and distribution centers, office space, vehicles, material handling equipment utilized in our production and assembly facilities, laptops and other information technology equipment, as well as other miscellaneous leased equipment. Most of the leased production and assembly facilities have lease terms ranging from two to five years, although the terms and conditions of our leases can vary significantly from lease to lease. We have assessed the specific terms and conditions of each lease to determine the amount of the lease payments and the length of the lease term, which includes the minimum period over which lease payments are required plus any renewal options that are both within our control to exercise and reasonably certain of being exercised upon lease commencement. In determining whether or not a renewal option is reasonably certain of being exercised, we assessed all relevant factors to determine if sufficient incentives exist as of lease commencement to conclude renewal is reasonably certain. There are no material residual value guarantees provided by us, nor any restrictions or covenants imposed by the leases to which we are a party. In determining the lease liability, we utilize our incremental borrowing rate to discount the future lease payments over the lease term to present value. As of October 31, 2019, the weighted-average remaining term of our lease portfolio was approximately 3.1 years.

New Accounting Pronouncements:

In February 2018, FASB issued ASU No. 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which will allow a reclassification from accumulated other comprehensive income to retained earnings for the tax effects resulting from the Tax Reform Act that are stranded in accumulated other comprehensive income. This standard also requires certain disclosures about stranded tax effects. This ASU, however, does not change the underlying guidance that requires the effect of a change in tax laws or rates be included in income from continuing operations. ASU 2018-02 will be effective for our fiscal year 2020, with the option to early adopt at any time prior to the effective date. It must be applied either in the period of adoption or retrospectively to each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Reform Act is recognized. We are currently assessing the impact this new accounting guidance will have on our consolidated financial statements and disclosures.

In August 2017, FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*, which simplifies the application of hedge accounting and enables companies to better portray the economics of their risk management activities in their financial statements. ASU 2017-12 is effective for our fiscal year 2020, including interim periods within the fiscal year, and requires modified retrospective application. Early adoption is permitted. We do not anticipate that the adoption of this new accounting guidance will have a material impact on our consolidated financial statements and disclosures.

There have been no other significant changes in the Company's critical accounting policies and estimates during the fiscal year ended October 31, 2019.

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

None.

Item 9A. CONTROLS AND PROCEDURES

Under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, we carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of October 31, 2019, pursuant to Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, our management, including the Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of the evaluation date.

There have been no changes in our internal control over financial reporting that occurred during the fourth quarter of the fiscal year ended October 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

The attestation report of our independent registered public accounting firm on our internal control over financial reporting is included in this report under Item 8. Financial Statements and Supplementary Data. Our management's annual report on internal control over financial reporting is included in this report immediately preceding Item 8.

Item 9B. OTHER INFORMATION

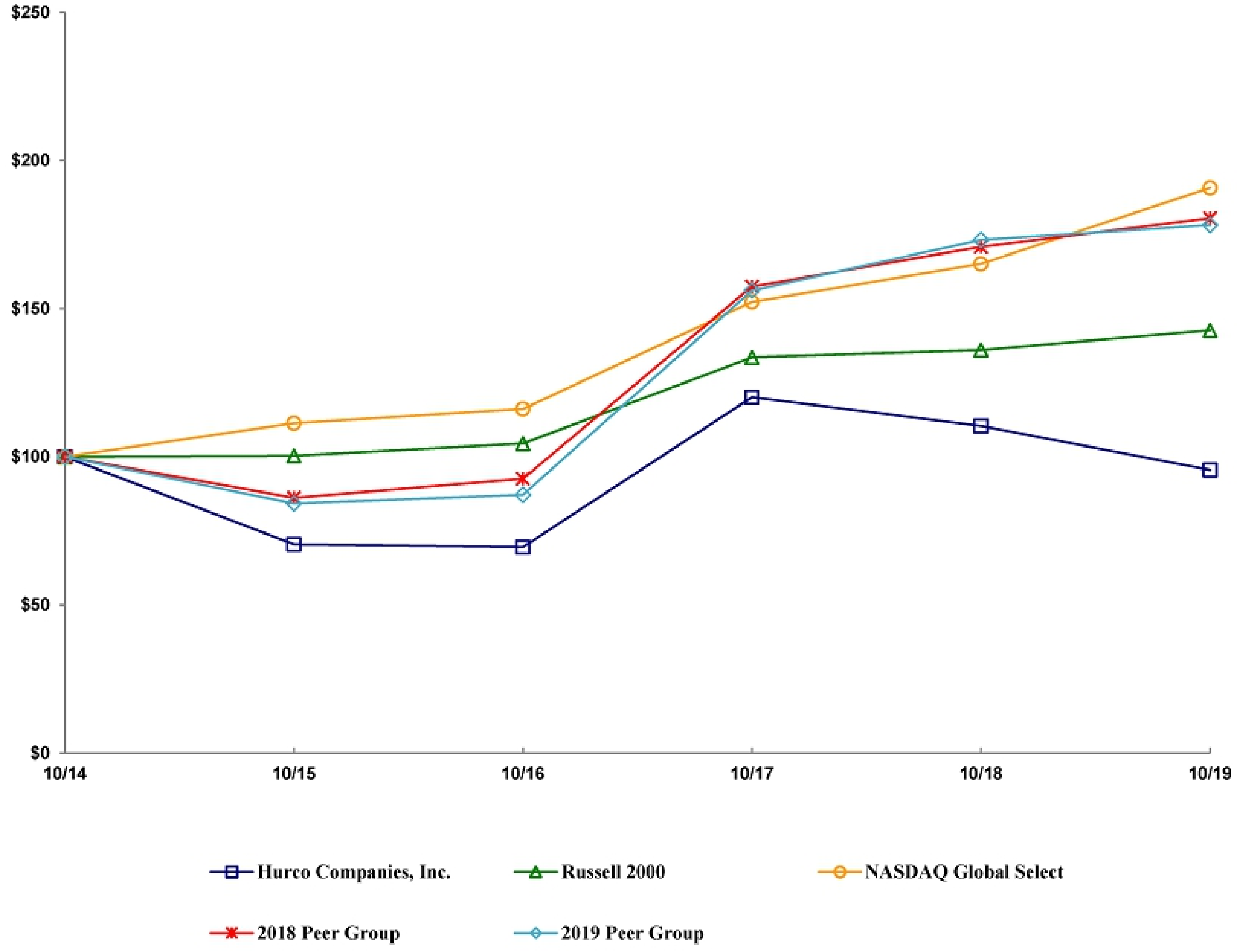
During the fourth quarter of fiscal 2019, the Audit Committee of the Board of Directors did not engage our independent registered public accounting firm to perform any new non-audit services. This disclosure is made pursuant to Section 10A(i)(2) of the Securities Exchange Act of 1934, as amended, as added by Section 202 of the Sarbanes-Oxley Act of 2002.

The graph below compares the cumulative 5-Year total return provided shareholders on Hurco Companies, Inc.'s common stock relative to the cumulative total returns of the Russell 2000 index, the NASDAQ Global Select index and two customized peer groups of sixteen companies and eighteen companies respectively, whose individual companies are listed in footnotes (1) and (2) below. An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock, in each index and in each of the peer groups on 10/31/2014 and its relative performance is tracked through 10/31/2019.

(1.) There are sixteen companies included in the company's first customized peer group which are: Ampco-Pittsburgh Corporation, DMC Global Inc., Douglas Dynamics Inc., The Eastern Company, FARO Technologies Inc., Graham Corporation, Kadant Inc., Key Tronic Corporation, The L. S. Starrett Company, Novanta Inc., Onto Innovation Inc., PDF Solutions Inc., Proto Labs Inc., QAD Inc., Helios Technologies and Transcat Inc.

(2.) The eighteen companies included in the company's second customized peer group are: Ampco-Pittsburgh Corporation, DMC Global Inc., Douglas Dynamics Inc., The Eastern Company, FARO Technologies Inc., Graham Corporation, IEC Electronics Corp, Kadant Inc., Key Tronic Corporation, The L. S. Starrett Company, Novanta Inc., Onto Innovation Inc., Proto Labs Inc., QAD Inc., Helios Technologies, Transcat Inc., Twin Disc Incorporated and Vishay Precision Group Inc.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Hurco Companies, Inc., the Russell 2000 Index, the NASDAQ Global Select Index,
2018 Peer Group and 2019 Peer Group



*$100 invested on 10/31/14 in stock or index, including reinvestment of dividends.
Fiscal year ending October 31.

	10/14	10/15	10/16	10/17	10/18	10/19
Hurco Companies, Inc.	**100.00**	**70.42**	**69.50**	**120.10**	**110.40**	**95.52**
Russell 2000	**100.00**	**100.34**	**104.46**	**133.55**	**136.03**	**142.70**
NASDAQ Global Select	**100.00**	**111.34**	**116.14**	**152.31**	**165.15**	**190.82**
2018 Peer Group	**100.00**	**86.15**	**92.58**	**157.48**	**170.92**	**180.56**
2019 Peer Group	**100.00**	**84.22**	**87.15**	**156.15**	**173.26**	**178.25**

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated herein by reference to the definitive proxy statement for our 2020 annual meeting of shareholders except that the information required by Item 10 regarding our executive officers is included herein under a separate caption at the end of Part I.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the definitive proxy statement for our 2020 annual meeting of shareholders.

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

The information required by this item is incorporated herein by reference to the definitive proxy statement for our 2020 annual meeting of shareholders.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated herein by reference to the definitive proxy statement for our 2020 annual meeting of shareholders.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference to the definitive proxy statement for our 2020 annual meeting of shareholders.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements. The following consolidated financial statements of the Company are included herein under Item 8 of Part II:

2. Financial Statement Schedule. The following financial statement schedule is included in this Item.

Schedule II - Valuation and Qualifying Accounts and Reserves
for the Years Ended October 31, 2019, 2018 and 2017
(Dollars in thousands)

Description	Balance at Beginning of Period	Charged to/ (Recovered from) Costs and Expenses	Charged to Other Accounts	Deductions	Balance at End of Period
Allowance for doubtful accounts for the year ended:					
October 31, 2019	$ 1,027	$ (136)	$ --	$ --(1)	$ 891
October 31, 2018	$ 639	$ 394	$ --	$ 6(1)	$ 1,027
October 31, 2017	$ 664	$ 46	$ --	$ 71(1)	$ 639
Income tax valuation allowance for the year ended:					
October 31, 2019	$ 2,106	$ 458	$ --	$ 337	$ 2,227
October 31, 2018	$ 2,282	$ 253	$ --	$ 429	$ 2,106
October 31, 2017	$ 2,067	$ 515	$ --	$ 300	$ 2,282

(1) Receivable write-offs.

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

(b) Exhibits

EXHIBITS INDEX

Exhibits Filed. The following exhibits are filed with this report:

4.1	Description of the Company's Common Stock.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Registered Public Accounting Firm, RSM US LLP.
31.1	Certification by the Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934, as amended.
31.2	Certification by the Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934, as amended.
32.1	Certification by the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification by the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

Exhibits Incorporated by Reference. The following exhibits are incorporated into this report:

3.1	Amended and Restated Articles of Incorporation of the Registrant, incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended July 31, 1997.
3.2	Amended and Restated By-Laws of the Registrant as amended through November 16, 2017, incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 17, 2017.
10.1*	Hurco Companies, Inc. 2016 Equity Incentive Plan, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 10, 2016.
10.2*	Form of Restricted Stock Agreement (Director) under the 2016 Equity Incentive Plan, incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 10, 2016.
10.3*	Form of Restricted Stock Award Agreement (Employee) under the 2016 Equity Incentive Plan, incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 10-Q for the quarter ended January 31, 2017.
10.4*	Form of Performance Stock Unit Award Agreement (Employee) under the 2016 Equity Incentive Plan, incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 10-Q for the quarter ended January 31, 2017.
10.5*	Hurco Companies, Inc. Cash Incentive Plan, incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on March 10, 2016.
10.6*	Employment Agreement dated March 15, 2012, between Hurco Companies, Inc. and Michael Doar, incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed March 16, 2012.
10.7*	Employment Agreement dated March 15, 2012, between Hurco Companies, Inc. and Gregory S. Volovic, incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed March 16, 2012.
10.8*	Employment Agreement dated March 15, 2012, between Hurco Companies, Inc. and Sonja K. McClelland, incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed March 16, 2012.
10.9*	Hurco Companies, Inc. 2008 Equity Incentive Plan, incorporated by reference to Appendix A of the Registrant's definitive Proxy Statement on Schedule 14A filed January 28, 2008.
10.10*	Form of restated split-dollar insurance agreement, incorporated by reference to Exhibit 10.2 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 2008.
10.11	Credit Agreement, dated as of December 31, 2018, among Hurco Companies, Inc. and Hurco B.V., as the Borrowers, certain subsidiaries party thereto, as the Guarantors, and Bank of America, N.A., as the Lender, incorporated by reference to Exhibit 10.1 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 2018.

* The indicated exhibit is a management contract, compensatory plan or arrangement required to be listed by Item 601 of Regulation S-K.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, this 3rd day of January, 2020.

HURCO COMPANIES, INC.

By: /s/ Sonja K. McClelland
Sonja K. McClelland
Executive Vice President, Secretary, Treasurer and
Chief Financial Officer

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

Signature and Title(s)	Date
/s/ Michael Doar Michael Doar, Chairman and Chief Executive Officer of Hurco Companies, Inc. (Principal Executive Officer)	January 3, 2020
/s/ Sonja K. McClelland Sonja K. McClelland Executive Vice President, Secretary, Treasurer and Chief Financial Officer of Hurco Companies, Inc. (Principal Financial Officer and Principal Accounting Officer)	January 3, 2020
/s/ Thomas A. Aaro Thomas A. Aaro, Director	January 3, 2020
/s/ Robert W. Cruickshank Robert W. Cruickshank, Director	January 3, 2020
/s/ Cynthia Dubin Cynthia Dubin, Director	January 3, 2020
/s/ Jay C. Longbottom Jay C. Longbottom, Director	January 3, 2020
/s/ Andrew Niner Andrew Niner, Director	January 3, 2020
/s/ Richard Porter Richard Porter, Director	January 3, 2020
/s/ Janaki Sivanesan Janaki Sivanesan, Director	January 3, 2020
/s/ Gregory Volovic Gregory Volovic, Director	January 3, 2020

Exhibit 4.1

DESCRIPTION OF HURCO COMPANIES, INC.'S COMMON STOCK

The following is a description of the common stock, no par value (the "Common Stock"), of Hurco Companies, Inc. (the "Company"), which is the only security of the Company registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

General

The Company is authorized to issue up to 12,500,000 shares of Common Stock. As of December 31, 2019, the Company had 6,770,233 shares of Common Stock outstanding.

The following description summarizes selected information regarding the Common Stock, as well as relevant provisions of (i) the Company's Amended and Restated Articles of Incorporation, as currently in effect (the "Articles"), (ii) the Company's Amended and Restated By-Laws, as currently in effect (the "By-Laws"), and (iii) the Indiana Business Corporation Law (the "IBCL"). The following summary description of the Common Stock of the Company is qualified in its entirety by reference to the provisions of the Company's Articles and By-Laws, copies of which have been filed as exhibits to the Company's periodic reports under the Exchange Act, and the applicable provisions of the IBCL.

Common Stock

Voting Rights. The holders of shares of Common Stock are entitled to one vote per share on all matters submitted to shareholders for a vote. The holders of shares of Common Stock do not have cumulative voting rights with respect to the election of directors or any other matter.

Dividend Rights. Subject to preferences to which holders of any preferred stock of the Company may be entitled, the holders of shares of Common Stock are entitled to receive such dividends as may be declared from time to time by the Board of Directors, in its discretion, from any assets legally available therefor.

Liquidation Rights. Subject to the prior payment or provision for payment of the debts and other liabilities of the Company and any preferential amounts to be distributed to holders of any preferred stock of the Company, in the event of any liquidation, dissolution or winding up of the Company, the holders of shares of Common Stock shall be entitled to share ratably in the remaining net assets of the Company.

Other Rights and Preferences. The holders of shares of Common Stock have no preemptive rights to subscribe to or purchase any shares of Common Stock or other Company securities. There are no redemption, sinking fund or conversion provisions applicable to the Common Stock. The holders of shares of Common Stock are not subject to further calls or assessments by the Company.

Transfer Agent and Registrar. The transfer agent and registrar for the Common Stock is Computershare Trust Company, N.A.

Listing. The Common Stock is traded on the Nasdaq Global Select Market under the symbol "HURC."

Anti-Takeover Effects of Provisions of the Company's Articles, By-Laws and the IBCL

Under certain circumstances, certain provisions of the IBCL, the Company's Articles and the Company's By-Laws may render more difficult, or may discourage, a merger, a tender offer, a proxy contest, the assumption of control of the Company by a holder of a large block of the Common Stock or other person, or the removal of incumbent management, even if such actions may be beneficial to the Company's shareholders generally.

Meetings of Shareholders. Under Chapter 29 of the IBCL and the Company's Articles, any action required to be taken by the Company's shareholders may be effected only at an annual meeting or special meeting of shareholders, and shareholders may act in lieu of such meetings only by unanimous written consent. The Company's By-Laws provide that special meetings of shareholders may be called by the Company's Board of Directors or President, or by the holders of a majority of all the votes entitled to be cast on any issue proposed to be considered at the proposed special meeting.

The Company's By-Laws also establish an advance notice procedure for the nomination, other than by or at the direction of the Company's Board of Directors, of persons for election as directors as well as for other shareholder proposals to be considered at annual meetings of shareholders. In general, notice of intent to nominate a director or raise business at such meetings must be delivered to the Company by a shareholder not less than 60 days prior to such meeting. Such notice must contain certain specified information concerning the person to be nominated and the shareholder submitting the proposal.

Amendment of By-Laws. The Company's Articles and By-Laws provide that the Company's Board of Directors has the exclusive authority to make, alter, amend or repeal the Company's By-Laws.

Special Transactions. The Company's Articles require the affirmative vote of the holders of not less than three-fourths of the outstanding shares of Common Stock for certain proposed transactions, including, but not limited to: (i) the merger or consolidation of the Company and a "related corporation"; (ii) the sale or exchange of all or substantially all of the Company's assets or business to or with a related corporation; (iii) the issue or delivery of Common Stock or any other Company securities in exchange or payment for property, assets or securities of a related corporation; and (iv) the merger of any of the Company's affiliates with or into a related corporation or any of its affiliates.

For purposes of the above provisions, the below definitions shall apply:

(a) "affiliate" means any person (including a corporation, partnership, trust, estate or individual) who, directly or indirectly, controls, is controlled by, or is under common control with the person specified; and

(b) "related corporation" means a corporation or entity or any of its affiliates, singly or in the aggregate, that are beneficial owners, directly or indirectly, of more than 5% of the total outstanding shares of Common Stock.

The foregoing requirements shall not apply to any transaction that has been (i) approved by resolution of the Board of Directors adopted by the affirmative vote of not less than two-thirds of the then authorized number of directors; or (ii) approved by resolution of the Board of Directors prior to the acquisition of the beneficial ownership of more than 5% of the total voting power of all outstanding shares of Common Stock by such related corporation and its affiliates.

Control Share Acquisitions. Under Chapter 42 of the IBCL, an acquiring person or group who makes a "control share acquisition" in an "issuing public corporation" may not exercise voting rights on any "control shares" unless these voting rights are conferred by a majority vote of the disinterested shareholders of the issuing public corporation at a special meeting of those shareholders held upon the request and at the expense of the acquiring person. If control shares acquired in a control share acquisition are accorded full voting rights and the acquiring person has acquired control shares with a majority or more of all voting power, all shareholders of the issuing public corporation have dissenters' rights to receive the fair value of their shares pursuant to Chapter 44 of the IBCL.

For purposes of Chapter 42 of the IBCL, the below definitions shall apply:

(a) "control share acquisition" means, subject to specified exceptions, the acquisition, directly or indirectly, by any person of ownership of, or the power to direct the exercise of voting power with respect to, issued and outstanding control shares. For the purposes of determining whether an acquisition constitutes a control share acquisition, shares acquired within 90 days or under a plan to make a control share acquisition are considered to have been acquired in the same acquisition;

(b) "control shares" means shares acquired by a person that, when added to all other shares of the issuing public corporation owned by that person or in respect to which that person may exercise or direct the exercise of voting power, would otherwise entitle that person to exercise voting power of the issuing public corporation in the election of directors within any of the following ranges: (i) one-fifth or more but less than one-third; (ii) one-third or more but less than a majority; or (iii) a majority or more; and

(c) "issuing public corporation" means a corporation which has (i) 100 or more shareholders, (ii) its principal place of business or its principal office in Indiana, or that owns or controls assets within Indiana having a fair market value of greater than $1,000,000, and (iii) (A) more than 10% of its shareholders resident in Indiana, (B) more than 10% of its shares owned of record or owned beneficially by Indiana residents, or (C) 1,000 shareholders resident in Indiana.

The above provisions do not apply if, before a control share acquisition is made, an Indiana corporation's articles of incorporation or by-laws, including a by-law adopted by the Indiana corporation's board of directors, provide that they do not apply. The Company's Articles and By-Laws do not exclude the Company from these provisions.

Certain Business Combinations. Chapter 43 of the IBCL restricts the ability of a "resident domestic corporation" to engage in any business combinations with an "interested shareholder" for five years after the date the interested shareholder became such, unless the business combination or the purchase of shares by the interested shareholder on the interested shareholder's share acquisition date is approved by the board of directors of the resident domestic corporation before the interested shareholder's share acquisition date. If such prior approval is not obtained, the interested shareholder may effect a business combination after the five-year period only if such shareholder receives approval from a majority of the disinterested shareholders or the offer meets specified fair price criteria.

For purposes of Chapter 43 of the IBCL, the below definitions shall apply:

(a) "beneficial owner" means a person who, directly or indirectly, owns the subject shares, has the right to acquire or vote the subject shares (excluding voting rights under revocable proxies made in accordance with federal law), has any agreement, arrangement or understanding for the purpose of acquiring, holding, voting or disposing of the subject shares, or holds any derivative instrument that includes the opportunity to profit or share in any profit derived from any increase in the value of the subject shares;

(b) "interested shareholder" means any person, other than the resident domestic corporation or its subsidiaries, that is (i) the beneficial owner, directly or indirectly, of 10% or more of the voting power of the outstanding voting shares of the resident domestic corporation or (ii) an affiliate or associate of the resident domestic corporation, which at any time within the five-year period immediately before the date in question, was the beneficial owner, directly or indirectly, of 10% or more of the voting power of the then outstanding shares of the resident domestic corporation; and

(c) "resident domestic corporation" means an Indiana corporation that has 100 or more shareholders.

The above provisions do not apply to corporations that elect not to be subject to Chapter 43 of the IBCL in an amendment to their articles of incorporation approved by a majority of the disinterested shareholders. That amendment, however, cannot become effective until 18 months after its passage and would apply only to share acquisitions occurring after its effective date. The Company's Articles do not exclude the Company from Chapter 43 of the IBCL.

Mandatory Classified Board of Directors. Under Chapter 33 of the IBCL, an Indiana corporation with a class of voting shares registered with the U.S. Securities and Exchange Commission under Section 12 of the Exchange Act must have a classified board of directors unless the Indiana corporation adopts a by-law expressly electing not to be governed by this provision. The Company's By-Laws contain a provision electing not to be subject to this mandatory requirement.

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

SUBSIDIARIES OF HURCO COMPANIES, INC.

Name	Jurisdiction of Incorporation
Hurco B.V	The Netherlands
Hurco Europe Limited	United Kingdom
Hurco GmbH	Federal Republic of Germany
Hurco India Private, Ltd.	India
Hurco Manufacturing Limited	Taiwan R.O.C.
Hurco S.a.r.l.	France
Hurco S.r.l.	Italy
Hurco (S.E. Asia) Pte Ltd.	Singapore
LCM Precision Technology S.r.l.	Italy
Machinery Sales Co.	United States
Milltronics USA, Inc.	United States
Ningbo Hurco Machine Tool Co., Ltd.	China

Hurco Companies, Inc. is the Company's headquarters in Indianapolis, Indiana, U.S.A. The foregoing list does not include other subsidiaries which, individually or in the aggregate, did not constitute a significant subsidiary as of October 31, 2019.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (No. 333-48204, 333-126036, 333-149809 and 333-210072) on Form S-8 of Hurco Companies, Inc. of our reports dated January 3, 2020, relating to the consolidated financial statements, the financial statement schedule and the effectiveness of internal control over financial reporting of Hurco Companies, Inc. appearing in this Annual Report on Form 10-K of Hurco Companies, Inc. for the year ended October 31, 2019.

/s/ RSM US LLP

Indianapolis, Indiana
January 3, 2020

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Michael Doar, certify that:

1. I have reviewed this annual report on Form 10-K of Hurco Companies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the registrant and have:

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

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. Generally Accepted Accounting Principles; and

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

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

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Michael Doar
Michael Doar
Chairman and Chief Executive Officer
January 3, 2020

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Sonja K McClelland, certify that:

1. I have reviewed this annual report on Form 10-K of Hurco Companies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the registrant and have:

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

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. Generally Accepted Accounting Principles; and

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

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

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Sonja K. McClelland

Sonja K. McClelland
Executive Vice President, Secretary, Treasurer and Chief Financial Officer
January 3, 2020

Exhibit 32.1

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Hurco Companies, Inc. (the “Company”) on Form 10-K for the year ended October 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certifies, pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Michael Doar
Michael Doar
Chairman and Chief Executive Officer
January 3, 2020

Exhibit 32.2

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Hurco Companies, Inc. (the “Company”) on Form 10-K for the year ended October 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certifies, pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Sonja K. McClelland
Sonja K. McClelland
Executive Vice President, Secretary, Treasurer and Chief Financial Officer
January 3, 2020