HURCO COMPANIES INC
Form 10-K
January 04, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10–K

(Mark One)

x Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended October 31, 2018 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	Name of each exchange on which registered
Common Stock, No Par Value	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 x

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 x

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 the filing requirements for the past 90 days.

Yes x 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 x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 (§229.405 of this chapter) of Regulation S–K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10–K or any amendment to this Form 10–K. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non–accelerated filer, 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

x 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 x

The aggregate market value of the registrant's voting stock held by non–affiliates as of April 30, 2018 (the last business day of our most recently completed second quarter) was $296,666,000.

The number of shares of the registrant's common stock outstanding as of December 18, 2018 was 6,723,160.

DOCUMENTS INCORPORATED BY REFERENCE: Portions of the registrant's Proxy Statement for its 2019 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”, “b “predict”, “estimate”, “potential”, “project”, “target”, “forecast”, “intend”, “strategy”, “future”, “opportunity”, “assume”, “guid 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, 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, governmental actions and initiatives including import and export restrictions and tariffs, 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, 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 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 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, South Africa, 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 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.

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 10% 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
- 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.

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,								
	2018			2017			2016		
Computerized Machine Tools	$261,710	87	%	$209,311	86	%	$195,618	86	%
Computer Control Systems and Software †	2,870	1	%	2,324	1	%	2,078	1	%
Service Parts	27,501	9	%	24,255	10	%	21,908	10	%
Service Fees	8,590	3	%	7,777	3	%	7,685	3	%
Total	$300,671	100	%	$243,667	100	%	$227,289	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 premium brand focused on innovative technology. Milltronics is the general purpose brand with a simplified control and straightforward feature sets. Takumi is an industry standard brand with machines that are equipped with industry standard controls instead of the proprietary controls found on Hurco and Milltronics machines. Typically, manufacturing facilities that use industry standard controls focus on medium to high production, wherein they run large batches of a few types of parts instead of small batches of many different types of parts. The Takumi brand also is targeted to die and mold customers. In addition, through our wholly–owned subsidiary LCM Precision Technology S.r.l. (“LCM”), we produce 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 or three–dimensional machining programs directly from an engineering drawing or computer–aided design geometry file. 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

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

- 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 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. For example, 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 or chuck 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. 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 consists of higher performing vertical machining centers aimed at manufacturers that require greater part accuracy. It is our flagship series of machining centers. 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.

Five–Axis Product Line

The five–axis product line is targeted at manufacturers seeking to produce multi–sided parts or true five–axis in a single setup. Machines in this product line can yield significant productivity gains for manufacturers that previously had to process each side of a part separately. Additionally, investing in five–axis technology helps our customers to expand their customer base, as they are able to bid on more complex projects that require simultaneous five–axis operations. The five–axis product line consists of 18 models with three different configurations: swivel head, trunnion table, and cantilever.

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–travel (a three–axis version and a five–axis version) as well as 53 and a 63–inch X–travel models.

HM/HMX 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–travel of 67 inches. The HMX product line is beneficial to manufacturers entering production manufacturing versus small batch manufacturing. The HMX machines have expanded tool capacity, a comprehensive chip management system, a built–in pallet changer, and a box–in–box design supported at both the top and bottom to increase rigidity for long production runs and heavy cuts. The HMX product line consists of three models in three sizes with X–axis travels of 24, 32, and 41 inches.

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 TM6, TM8, TM10, TM12, TM18, TM18L, and TM18BB. The TM18BB big bore turning center targets the energy and aerospace industries because it has a larger chuck diameter and bigger bar capacity for larger parts. 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: TMM8, TMM10, and TMM12.

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 that want to reduce part handling and complete complex components 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.

New Product Lines

In fiscal 2018, we introduced the VCX600i and the VCX600HSi, two new cantilever five–axis models designed for larger parts that require more accuracy and speed. The new models feature high–speed 23.6 inch direct drive C–axis rotary tables, available in the standard model as well as a high–speed spindle version. A new 63–inch machine was also added to the BX Series. Additionally, Hurco upgraded its VMX Series machining centers and TM Series of lathes in fiscal 2018, with product improvements aimed at making these models stronger, faster and more flexible. New optional direct–drive spindles were also introduced for the VMX models in fiscal 2018. The VM Series also became available with faster spindle speeds, called Plus models.

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 tool room products and the more advanced Series 9000 offered on our new vertical machining centers and bridge mills.

The Milltronics portfolio consists of the following product lines:

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 control. Customers can choose models with X–axis (horizontal) travels of 25, 30, 40 or 50 inches.

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 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 50–taper models are either gear driven, or heavy–duty belt driven and include the Series 9000 control. Customers can choose from three different models with X–axis travels of 43, 50 or 60 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 8200–B control.

MM/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 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 8200–B 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 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 8200–B control.

New Product Lines

In fiscal 2018, we introduced two new CNC slant bed lathes called the SL6–II and the SL10–II. These compact machines feature the 9000 Series control and are designed for job shops, short–run production or other general purpose machining applications. Milltronics also introduced a new version of the popular VM 50–inch machine with extended spindle nose to table. This machine is designed for special applications that require rotary tables with large swings.

Takumi CNC Machine Tools

Our Takumi machine tools feature industry standard CNC controls, including Fanuc®*, Siemens®, Mitsubishi® or Heidenhain®. Models include drill and tap machines; 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. The Takumi brand customer base includes manufacturers that opt for industrial controls. Generally, manufacturers who use industrial controls have production–oriented operations where they run medium to large batches of just a few different types of parts. Additionally, die and mold shops are another important market segment for the Takumi brand.

The Takumi portfolio consists of the following product lines:

VT Series

The VT Series includes one high–speed drill and tap machine. Model VT500 features fast tool change times and rapid spindle acceleration/deceleration. This three–axis machine is designed for high volume production applications such as automotive parts or electronics components.

VC Series

The VC Series vertical machining centers are fast, three–axis linear guide machining centers designed for customers doing batch or production work. The VC machines are available in two sizes with X–axis travels of 34 and 42 inches.

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 five models, four of which offer trunnion table sizes of 10, 16, 24 and 31.5 inches. One addition model, the UB, is equipped with B/C swivel head and HSK100, 12K built–in spindle. The UB's double column design provides spacious X–axis travel of 126 inches.

*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.

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 mold and die. This model includes a 6,000 rpm geared–head design with X–axis travels of 82 inches.

New Products

In fiscal 2018, we introduced the SL slant–bed lathe series to the Takumi product line. These turning centers are 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.

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 original equipment manufacturers.

Autobend®

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.

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.

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

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.

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.

3D Print Head

Hurco has designed and offers a 3D print head technology that allows a Hurco CNC machine to be used for 3D printing, which is advantageous for prototyping. It is used as an attachment to an existing machine and requires no external power supply.

LCM Machine Tool Components and Accessories

Based in Italy, LCM designs, manufactures and sells mechanical and electro–mechanical components and accessories for machine tools. 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 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. 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, 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 173 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, South Africa, Taiwan, the United Kingdom and certain parts of the United States, which are among the world's principal machine tool consuming markets.

Approximately 90% of the worldwide demand for computerized machine tools and computer control systems is outside of the U.S. In fiscal 2018, approximately 71% of our revenues were derived from customers outside of the U.S. 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 original equipment manufacturers 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 which 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., Hardinge 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 800 full–time employees at the end of fiscal 2018, none of whom are covered by a collective–bargaining agreement or represented by a union. 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 (the "Exchange Act"), 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 2018, approximately 71% of our revenues were derived from sales to customers located outside of the U.S. 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;
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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;

- changes in tax regulations and rates in foreign countries; and
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