

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D. C. 20549

FORM 10-K

- Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
For the fiscal year ended December 31, 2017
- Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

001-9731

(Commission file number)

MICRON SOLUTIONS, INC.

(Name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation of organization)

25 Sawyer Passway, Fitchburg, MA

(Address of principal executive offices)

72-0925679

(IRS Employer Identification Number)

01420

(Zip Code)

(978) 345-5000

(Registrant's telephone number)

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

Common Stock, \$.01 par value

(Title of Each Class)

NYSE AMERICAN

(Name of each exchange on which registered)

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 15(d) of the Exchange Act. Yes No

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

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

Indicate by check mark if disclosure of delinquent filers in response to Item 405 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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 Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter was \$10,867,502.

On March 26, 2018, there were 2,844,935 shares of the registrant's common stock, par value \$.01, outstanding, which is the only class of common or voting stock of the issuer.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days following the fiscal year ended December 31, 2017. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

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Micron Solutions, Inc.

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Micron Solutions, Micron Products and our other registered or common law trademarks, service marks or trade names appearing in this annual report on Form 10-K are the property of Micron Solutions and/or Micron Products. Other trademarks and trade names referred to in this annual report on Form 10-K are the property of their respective owners.

PART I

Item 1. BUSINESS

OVERVIEW

Micron Solutions[®], Inc., a Delaware corporation ("Micron Solutions"), through its wholly-owned Massachusetts operating subsidiary, Micron Products[®], Inc. ("Micron" and together with Micron Solutions, the "Company"), is a diversified contract manufacturing organization ("CMO") that produces highly-engineered, innovative medical device components requiring precision machining and injection molding. The Company also manufactures components, devices and equipment for military, law enforcement, automotive and consumer product applications. The Company is engaged in the production and sale of silver/silver chloride coated and conductive resin sensors used as consumable component parts in the manufacture of integrated disposable electrophysiological sensors. These disposable medical devices are used worldwide in the monitoring of electrical signals in various medical applications. The Company's machining operations produce quick-turn, high volume and patient-specific finished orthopedic implant components. The Company has custom thermoplastic injection molding capabilities as well, and provides a full array of design, engineering, production services and management. The Company competes globally, with approximately 42% of its revenue derived from exports.

The Company's common stock has been listed on the NYSE American exchange since 1992 and traded under the ticker symbol HRT until March of 2017 when the Company changed its ticker symbol to MICR in conjunction with its name change from Arrhythmia Research Technology, Inc. to Micron Solutions, Inc.

Micron is a diversified contract manufacturing organization and provides design, engineering, quality and regulatory expertise across the Company's three product lines, machining, thermoplastic injection molding and sensors, with lean and fast fulfillment systems using proprietary manufacturing processes to enable the Company's customers to be competitive throughout the product life cycle.

Contract Manufacturing

Machining

The Company is a contract manufacturer of components and instruments for medical devices including, but not limited to large joint replacements, wrist plates, rib fixation plates, and screws. The Company also manufactures machined components for a variety of industries including aerospace and defense. Specialized components used in Total Knee Arthroscopy including femoral surface replacements, tibia trays, ultra-high-molecular-weight polyethylene ("UHMWPE") inserts, trials and instrumentation as well as hip stems and fixation plates used in rib and wrist fractures are fabricated, machined and polished, heat treated and passivated at Micron. These parts are primarily made from investment castings (F-75, stainless steel), machining wrought bar (F-75, stainless steel, F-136 Ti 6A-4V ELI), UHMWPE, polyether ether ketone ("PEEK"), Raydel[®] and other materials. The Company also employs validated processes and controls suitable for medical device components including heat treating, finishing, polishing, ultrasonic cleaning and passivation. The manufacturing process includes computer aided design ("CAD"), computer-aided manufacturing ("CAM"), computer numerical controlled ("CNC") machining using single piece flow manufacturing methods for personalized orthopedic implant components as well as higher volume off-the-shelf components in a variety of sizes. The Company deploys the latest technologies in computer aided design, computer aided manufacturing (CAD/CAM) methodology, and up to 11-axis CNC vertical milling, mill-turning and wire electrical discharge machining ("EDM"). These products involve complex programming and machining of wrought, cast and forged cobalt-chromium-molybdenum, titanium, and stainless steel alloys, as well as ultra-high molecular weight and other polymers to customer specifications. The Company brings articular surfaces of implant components to a highly polished state as part of the manufacturing process, ready for sterilization and packaging. The Company produces superior contoured machined surfaces on metal and high molecular weight polymers to complete the implant kit. Whether patient-specific, where each implant is a different geometry, or standard-sized off-the-shelf products, each requires precision, speed, and adherence to the most stringent of quality standards. Additional capabilities include laser marking, automated polishing, passivation, and coatings. The Company also offers contract inspection and packaging in its own clean room facilities.

Thermoplastic Injection Molding

The Company's custom thermoplastic injection molding services are especially suited to meet the needs of customers who require very high quality parts, clean room molding, assembly and packaging to tight tolerances using engineered materials. The Company offers highly automated pick and place packaging, assembly, and in-cycle vision inspection. Micron's ITAR registration, Federal Firearms class-10 and Federal Explosive licenses assures military and defense customers that their stringent regulatory requirements are in compliance. The Company also offers over-molding, insert molding, high volume/low change, and low volume/high change injection molding. The Company adds value with highly repeatable and reliable manufacturing with ongoing innovations for cost improvements. Other value added services including packaging, assembly, pad printing, ultrasonic welding, stamping, laser marking, clean room molding, clean room assembly, specialty coatings, and plastic machining.

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Other Products and Services

The Company provides its customers with key value added services, including the design, manufacture, and rehabilitation of injection molding tools. These capabilities leverage significant cost savings and speed by vertically integrating mold making and repair into the Company's sensor and thermoplastic injection molding businesses. The Company's engineers and mold designers work with customers' product development engineers to design and produce unique tooling for their products. The Company creates a sustainable partnership with the customers from prototyping to full scale production. The design and manufacture of tooling is an indicator of future product revenue.

The Company's product life cycle management program is focused on the integration of plastic and metal components into sub-assemblies. The value added service of in-house production capabilities combined with a network of subcontracted specialty coatings, metallurgical treatments, and unique production capabilities has enabled the Company to diversify its capabilities to include defense industry consumables and equipment sub-assemblies.

Sensors

Micron is a leading manufacturer and distributor of silver-plated and non-silver plated conductive resin sensors for use in the manufacture of disposable electrodes for electrocardiogram ("ECG") diagnostic, monitoring and related instrumentation. Micron's sensors consist of a molded plastic substrate plated with a silver/silver chloride surface, which is a highly sensitive conductor of electrical signals. Silver/silver chloride-plated disposable electrodes are utilized in coronary care units, telemetry units, and for other monitoring purposes. In addition to the traditional ECG tests, disposable electrodes incorporating Micron's sensors are used in connection with cardiac stress tests, Holter monitoring, and event recorders.

Micron also manufactures sensors and conductive plastic studs used in the manufacture of radio translucent electrodes. The radio translucent conductive plastic studs are manufactured with uniquely engineered resin to enable electrical conductivity between the sensor and the recording instrument without the use of a metal snap. The radio translucent electrodes are virtually invisible to X-rays and are preferred in some medical environments such as nuclear medicine, cardiac catheterization laboratories, and certain stress procedures. Micron also manufactures the mating conductive resin snaps, which replace traditional metal snap fasteners in the radio translucent applications. These sensors and snaps have undergone testing and received a MR-Conditional designation in accordance with the American Society for Testing and Materials (ASTM) specifications F2052-06e1, F2182-09 and F2119-07 from a licensed, accredited, independent testing laboratory. Other custom designed sensors are manufactured for specific unique applications in the electroencephalogram (EEG), electro-muscular stimulation (EMG) or thermo-electrical neural stimulation (TENS) markets.

Customers and Net Sales

The Company offers its products and services to customers of all sizes, including large original equipment manufacturers (OEMs) and other contract manufacturing organizations. The Company manufactures products upon receipt of purchase orders. The Company generally does not receive purchase volume commitments extending beyond several months; however, the Company has a track record of establishing long term relationships with customers which results in repeat business year over year.

During the year ended December 31, 2017, the Company had net sales to two customers constituting 17% and 10% of total 2017 net sales. Accounts receivable from these two customers at December 31, 2017 was 13% and 3%, respectively, of the total accounts receivable balance at year end. During the year ended December 31, 2016, the Company had net sales to two customers constituting 19% and 12%, respectively, of total 2016 net sales. Accounts receivable from these two customers at December 31, 2016 was 26% and 7%, respectively, of the total accounts receivable balance at year end.

The following table sets forth, for the periods indicated, the consolidated revenue and percentages of revenue derived from the sales of the Company's products and services in certain industries.

	Revenue for the Year Ended December 31,			
	2017	%	2016	%
Medical	\$ 15,170,382	76	\$ 14,543,315	74
Automotive/Industrial	3,648,393	18	3,787,312	19
Military and Law Enforcement	417,358	2	744,738	4
Consumer Products	848,210	4	383,254	2
Other	18,319	—	179,598	1
Total	\$ 20,102,662	100	\$ 19,638,217	100

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The following table sets forth, for the periods indicated, the consolidated revenue and percentages of revenue derived from the sales of all of the Company's products and services by geographic market.

	Revenue for the Year Ended December 31,			
	2017	%	2016	%
United States	\$ 11,721,117	58	\$ 12,206,761	62
Asia	4,641,806	23	4,283,180	22
Europe	1,629,297	8	1,677,100	9
Canada	1,998,683	10	1,268,817	6
Other	111,759	1	202,359	1
Total	\$ 20,102,662	100	\$ 19,638,217	100

While some risks exist in foreign markets, the Company's customers have historically been based in stable regions. Approximately 42% of the Company's revenue is derived from exports. To reduce the risks associated with foreign shipments and currency exchange fluctuations, the title to most of the products are transferred to the customers when shipped. Payment is required in U.S. Dollars. The Company also has agreements with certain foreign customers to hold inventory at customer locations where title transfers and revenue is recognized when the product is consumed by the customer. To further reduce risk, the Company sells to certain markets only with cash-in-advance or letter-of-credit terms. In addition, accounts receivable insurance is used where available and appropriate to further reduce risk in these markets.

Marketing and Competition

The Company markets its capabilities and services to current and potential customers to provide full product life-cycle support to their product manufacturing needs. The Company's sales force leverages its long standing relationships and targets new and potential customers through direct marketing via Micron's website (www.micronproducts.com) and regularly attending industry trade shows. As part of a total marketing and sales strategy the Company continues to invest in website enhancements and a variety of internet marketing and lead generation programs. The Company provides value added U.S. based manufacturing capabilities with plating/coating, injection molding, machining, mold making, maintenance and repair. Customers seek the Company's ability to produce complex products on short time lines and to their specifications. Micron's ISO 13485:2003 and ISO 9001:2008, registrations, the international quality standards for medical devices and manufacturing, qualify Micron to supply products requiring tight process controls and high standards. The Company's International Traffic in Arms Regulation ("ITAR") registration with the U.S. Department of State ("State Department") allows the Company to compete in military and law enforcement applications restricted by export controls and the U.S. Department of Defense ("DOD"). Micron also holds a class-10 federal firearms license and a federal explosives license for manufacture of products for the military and law enforcement.

The Company's U.S. based manufacturing capabilities are offered in a global and highly competitive market. Free trade agreements increase global competition, making every company in the same manufacturing arena around the world a potential customer or competitor. To meet this challenge, the Company focuses its development efforts on complex engineered products. Some of these products require specialty material, such as engineered resins, exotic metals, and alloys. Micron has over forty-five years of experience in some product areas with long customer relationships and has developed competitive advantages through decades of process improvement and utilization of Lean/Six Sigma principles. The Company competes on the basis of quality and speed to market. The Company also believes its expertise in manufacturing and processes to comply with governmental regulations governing medical devices provides a competitive advantage in the marketplace. To remain competitive and to expand market share, the Company invests in training and educating its workforce, expanding manufacturing capacity and automating processes to increase productivity.

Manufacturing and Suppliers

The Company has registered its facilities with the U.S. Food and Drug Administration ("FDA") as well as under the U.S. State Department's ITAR registration. Micron is ISO 13485:2003 and ISO 9001:2008 registered. Micron's injection molding machine capacity ranges from 15 to 220 tons and includes an ISO class 7 clean room. Machining, mold making and tooling capabilities include up to 11 axis CNC machining and mill-turn centers, wire electrical discharge machining ("EDM"), milling, turning, grinding, polishing, cleaning, passivation, assembly and packaging. Surface coating capabilities include electroless and electrolytic silver plating. A skilled employee base provides expertise in engineering, complex manufacturing, materials, process control, quality and automation.

While some customers may require engineered raw materials, the Company also uses commodity raw materials as the basis for its value-added manufacturing operations. Many of these commodities are widely available from multiple sources. Some specialty plastics are single sourced and, in a few cases, proprietary to the products the Company manufactures. The Company monitors the supply chain for commodity materials to manage availability in case of breaks in the global supply chain. For many products, the Company is one step in a complex supply chain for OEM customers. This requires coordination with upstream and downstream vendors in the supply chain. Coordination of production scheduling is imperative to meeting customer expectations.

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Inventory Requirements

The Company stocks inventory of raw materials, work in process, and finished goods.

The Company manages inventory levels to balance customer delivery requirements, manufacturing production scheduling efficiencies and supply chain coordination from suppliers and to customers. In many cases, the Company produces to a purchase order in a single production run to optimize production efficiency and holds inventory for customers to support multiple delivery dates. The Company also has supply agreements with certain foreign customers to hold inventory at their warehouses. Customers benefit from Micron's ability to hold inventory on their behalf for just-in-time deliveries while the Company benefits from being able to optimize efficiencies of production scheduling and raw material volume purchasing.

Research and Development

Research and development of a unique process to improve silver coating and sensor performance is ongoing and includes the design and testing of specific process improvements for certain medical device components. The Company also conducts customer funded research and development of new products in the military and law enforcement industry. For the year ended December 31, 2017 the Company spent \$111,014 on research and development compared to \$97,234 for the year ended December 31, 2016. The Company regularly explores new product ideas and concepts as part of its core strategy for growth.

Patents and Proprietary Technology

The Company develops and utilizes proprietary manufacturing processes to establish and maintain a competitive advantage. By having internal engineering, mold making, automation and manufacturing expertise, the Company is able to develop specialized processes throughout the product development and product manufacturing cycle. The Company has submitted a patent application for an innovation integrated into an ammunition component used worldwide by military and law enforcement. The innovation allows for a more consistent velocity of a projectile which is found in most high/low pressure small arms ammunition platforms. The Company also applied for patent protection for the design of a novel sensor eyelet used in Electrocardiographic (ECG) recording. The design may provide a better conductive path and longer shelf life of silver/silver chloride sensor components. The Company is currently working on several other projects which may qualify for patent protection.

Government Regulation

The Company's operations are subject to government regulations which establish compliance standards. As a result, there may be additional costs incurred to comply with such regulations in order to participate in certain markets. The medical device industry in particular requires strict compliance with governmental standards. The Company believes its expertise in manufacturing and processes to comply with these regulations provides a competitive advantage in the marketplace. The FDA and the European Union equivalent ("CE Mark") promulgate quality systems requirements under which a medical device is to be developed, validated and manufactured. The DOD, Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE) and the State Department also impose regulations on the production and transfer of certain goods and technical data. Because customers own the product designs, they may be directly subject to such regulations. The development or manufacture of such products must be managed in accordance with applicable regulatory requirements and any special controls required by customers. The Company's manufacturing facilities are subject to periodic inspections by the FDA and other agencies to determine compliance with regulations and other requirements.

Conflict Minerals

The Financial Reform Bill (H.R. 4173) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, also known as the Dodd-Frank Act, imposed reporting requirements relating to the use of a group of minerals extracted from the Democratic Republic of Congo ("DRC") and surrounding regions. These minerals are known as "Conflict Minerals" and include tin, tungsten, tantalum and gold. The Company uses tin in parts of its production and its suppliers have confirmed that none of the tin or tin concentrates used by the Company in the production of products originate from the DRC or surrounding regions.

Environmental Regulation

The Company's operations involve use of hazardous and toxic materials and generate hazardous, toxic and other regulated wastes. Its operations are subject to federal, state and local laws, regulations and directives governing the use, storage, handling and disposal of such materials and certain waste products. Micron practices and reaffirms its commitment to and performance of the highest standards of environmental controls and occupational health and safety standards. Micron has developed an internal system of compliance as well as retained independent environmental consulting firms to regularly review, monitor and upgrade its air and waste water treatment facilities. The Company has introduced several new initiatives including the use of solar energy and energy efficient machinery and lighting to benefit from renewable energy generation and reduce overall costs associated with production. The Company employs best practices to reduce waste from its manufacturing operations and reclaims, recovers, and reuses materials to reduce pollutants and to minimize the impact on the environment. The Company also works closely with state and local officials to ensure

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compliance with current and proposed regulations while supporting a regulatory environment that allows complex manufacturing to be competitive globally.

Seasonality

In general, the Company does not experience significant seasonality in its business. However, as a component supplier within broad manufacturing supply chains, occasional seasonal adjustments to production schedules may impact timing of orders from customers and consequently result in quarterly fluctuations in revenue.

Employees

As of December 31, 2017, the Company had a total of 95 employees, of which 94 were full time employees as compared to 107, of which 106 were full time at December 31, 2016. Management believes that continued success will depend on its ability to retain and recruit skilled personnel. The Company has never had a work stoppage and none of the Company's employees are represented by a union. Management believes the Company has a good relationship with its employees.

Periodic Reporting and Financial Information

The Company registered its common stock under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and has reporting obligations, including the requirement that it file annual and quarterly reports with the SEC. The public may read and copy materials the Company files with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549, on official business days during the hours of 10:00 am to 3:00 pm. You may obtain information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>. The Company also makes available through its website the annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports as soon as reasonably practical after filing with the SEC. Its website address is <http://www.micronsolutionsinc.com>. Information on the Company's website is not part of this Annual Report on Form 10-K.

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Item 1A. RISK FACTORS

In addition to the other information in this Form 10-K, the following factors should be considered in evaluating the Company and its business. The risks and uncertainties described below are not the only ones facing the Company. Further, the market price of the Company's common stock could be subject to significant fluctuation or otherwise be adversely affected by the events, risks and uncertainties described in this "Risk Factors" section. Additional risks and uncertainties that the Company does not presently know or that are currently not deemed significant to the Company's business may also impair the Company's business, results of operations and financial condition.

The Company's operating results may fluctuate significantly in the future as a result of a variety of factors, many of which are outside of the Company's control. These factors include:

- the Company's ability to obtain and retain order volumes from customers who represent high proportions of revenue;
- the Company's ability to maintain the pricing model, offset higher costs with price increases and/or decrease the cost of sales;
- the variability of customer delivery requirements and the ability of the Company to anticipate and respond thereto;
- the level of sales of higher margin products and services and the Company's ability to increase such sales;
- volatility in commodity and energy prices and the Company's ability to offset higher costs with price increases;
- the Company's ability to manage its level of debt which makes the Company sensitive to the effects of economic downturns; the Company's level of debt and provisions in the debt agreements could limit the Company's ability to react to changes in the economy or its industry;
- the Company's failure to comply with the financial and other covenants contained in its asset based credit and security agreement, including as a result of events beyond its control, which could result in an event of default, and adversely affect the Company's operating results and financial condition;
- the Company's reliance on revenue from exports and the impact on the Company's financial results due to economic uncertainty, changes in trade policy, tax laws and regulations, or downturns in foreign markets;
- continued availability of supplies or materials used in manufacturing at competitive prices;
- the amount and timing of investments in capital equipment, sales and marketing, engineering and information technology resources;
- the Company's ability to attract and retain employees with the skills to meet the technically complex demands of manufacturing;
- entrance of competitive products and services in the Company's markets;
- the Company's ability to develop and implement plans and motivate personnel in the execution of those plans;
- the Company's ability to protect and retain trade secrets related to the Company's manufacturing processes;
- adverse claims relating to the Company's intellectual property and product liability claims affecting the Company's products;
- adoption of new, or changes in, accounting principles; and passage of new, or changes in regulations;
- adverse regulatory developments specifically healthcare policy changes, environmental and other regulatory changes;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010;
- the Company's ability to prevent information systems interruptions, cybersecurity attacks or other disruptions;
- the Company's ability to efficiently integrate future acquisitions and new lines of business that the Company may enter in the future, if any;
- the Company's ability to maintain compliance with the NYSE American requirements for continued listing of the Company's common stock in which event the Company's securities may be delisted from the NYSE American which could limit investors' ability to effect transactions in the Company's securities and subject the stock to additional trading restrictions;
- other risks referenced from time to time elsewhere in this report and in the Company's filings with the SEC; and
- general economic conditions.

As a response to changes in the competitive or economic environment, the Company may from time to time make certain pricing, delivery, service, technology or marketing decisions, or business or technology acquisitions, or experience fluctuations or reductions in customer orders that could have a material adverse effect on the quarterly and annual results. Due to all of these factors, the operating results may not meet the expectations of stockholders and investors in any future period and make period to period comparisons difficult.

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The Company is dependent on a limited number of large customers. The loss of, or inability to obtain and retain order volumes from, one or more of these customers, could have an adverse effect on the Company's financial results.

During the year ended December 31, 2017, the Company had net sales to two customers constituting 17% and 10% of total 2017 net sales. Accounts receivable from these two customers at December 31, 2017 was 13% and 3%, respectively, of the total accounts receivable balance at year end. During the year ended December 31, 2016, the Company had net sales to two customers constituting 19% and 12%, respectively, of total 2016 net sales. Accounts receivable from these two customers at December 31, 2016 was 26% and 7%, respectively, of the total accounts receivable balance at year end.

Large corporations can change their demand for the Company's products and services with little or no warning making it difficult to forecast beyond the current or next quarter. In the case of precious metal plating, customer purchase arrangements take into account the fluctuating price of precious metals.

The loss of, or significant reduction in order volume, from one or more of these customers, could have an adverse effect on the Company's financial results.

The Company competes globally, with a large portion of its revenue derived from exports. Economic uncertainty or downturns in foreign markets could result in variability or have an adverse effect on the Company's financial results.

While some risks exist in foreign markets, the Company's customers have historically been based in stable regions. Approximately 42% of the Company's revenue is derived from exports. To reduce the risks associated with foreign shipments and currency exchange fluctuations, the title to most of the products are transferred to the customers when shipped. The Company also has agreements with certain foreign customers to hold inventory at customer locations where revenue is recognized when the product is consumed by the customer. Payment for all product is required in U.S. Dollars. Additionally, the strength of the U.S. Dollar could affect the demand for the Company's products, or the timing of orders. This uncertainty could have an adverse effect on the Company's financial results.

In June 2016, the United Kingdom (the "U.K.") held a referendum in which voters approved an exit from the European Union (the "E.U."), commonly referred to as "Brexit". On March 29, 2017, the U.K. formally notified the E.U. of its intentions to withdraw pursuant to the Lisbon Treaty. The uncertainty surrounding the negotiation of the terms of the U.K.'s withdrawal and its consequences may create global economic uncertainty, or disrupt trade between the U.K. and the E.U. This uncertainty may cause the Company's customers to closely monitor their costs and reduce their spending budget which could adversely affect the Company's financial condition.

Adverse developments in U.S. government trade policy and legislation, the imposition of tariffs or changes in diplomatic relations with countries in which our customers are located or conduct business may adversely affect our financial condition and results of operations.

The 2016 presidential and 2016 and 2018 congressional elections in the United States could result in significant changes in, and uncertainty with respect to, legislation, regulations and monetary, tax and trade policy, among other things. Potential changes in U.S. government trade policy and legislation, withdrawal from or modification of international trade agreements, the imposition of additional tariffs on goods or other restrictions on trade and any changes in diplomatic relations with countries in which our customers are located or in which they conduct business may adversely affect our customers and, as a result, could materially affect our operating results.

Quarter to quarter variables, such as customer mix and profitability by product line, can be expected to result in fluctuations in quarterly results and make quarter to quarter comparisons difficult.

The Company is a contract manufacturing organization providing components to a wide array of industries and supplying OEM's of various sizes up to and including Fortune 500 companies. As a result of the diversity of components and the Company's reliance on large OEM's, who can change their demand with little or no notice, the Company will continue to see fluctuations in quarterly revenue and earnings, which could make quarter to quarter and year over year comparisons difficult.

The Company's top five customers, comprised 49% of sales in 2017 and 51% of sales in 2016. As the Company continues to diversify its revenue base across all its product lines, the broader customer mix results in additional variables which can affect operating results, product mix, product line gross margins and customer ordering patterns.

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If the Company is unable to keep up with rapid technological changes, the processes or services it offers, or products it manufactures, may become obsolete or if the Company is no longer able to effectively manufacture, market and distribute these products, it could have a material adverse effect on the Company's financial condition.

The medical device industry is characterized by continual technological change. Although the Company attempts to expand technological capabilities in order to remain competitive, the Company may be unable to effectively develop and market competitive products, processes and services, or be able to meet the manufacturing needs related to new discoveries or developments by others, on a timely basis. This may make the Company's processes, products or services obsolete or uneconomical. Any substantial technological advance that eliminates one or more of the Company's product lines could have a material adverse effect on the Company's operating results. The Company generally does not receive purchase volume commitments extending beyond several months. Large corporations can shift focus away from a need for the Company's products and services with little or no warning. Additionally, should any of the Company's large OEM customers decide to vertically integrate the manufacturing of a product line, or chose to limit the number of qualified suppliers, the Company's operating results may be adversely impacted. If the Company cannot compete effectively in the marketplace, the Company's future prospects and financial results may be adversely impacted.

The Company's dependence on large OEM customers, which can change demand on short notice, adds to the unpredictability of quarterly sales and earnings.

The Company's large OEM customers are not required to have purchase volume commitments extending beyond several months and often lack dependable long-term forecasts. In addition, the Company's large OEM customers may change their demand schedule, either up or down, within a relatively short time horizon. Further, large OEM customers may choose to develop the capability of producing their own products. In addition, new customers may experience development delays, such as delays in FDA approvals, marketing delays in the development of sales channels or inadequate financing, any of which may delay the launch of new products and therefore may affect the timing of sales.

The Company's quarterly results have in the past and can be expected in the future to vary due to changes in demand within a quarter from large OEM customers. These changes in demand may also result in the Company incurring additional working capital costs and increased manufacturing unit cost due to these short-term fluctuations. The expense levels and inventory, to a large extent, are based on shipment expectations in the quarter. If sales levels fall below these expectations, through a delay in orders or otherwise, operating results are likely to be adversely affected. An inability to accurately predict customer requirements makes cost-saving measures more difficult to implement.

Although the Company seeks to leverage its demonstrated product quality and expertise to expand its customer base and lessen its dependence on a few large customers, it can provide no assurance that it will be able to materially alter this dependency in the immediate future, if at all.

The failure to make timely payments on our asset based credit and security agreement or to comply with financial and other covenants contained therein, including as a result of events beyond the Company's control, could result in an event of default, which, if incurred, could materially and adversely affect operating results and financial condition.

The debt service obligations under the Company's asset based credit and security agreement will require the Company to use a portion of its operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of its business, acquisitions, and ongoing capital expenditures, which could impede growth. The asset based credit and security agreement contains covenants that relate to various matters including certain financial covenants, prohibitions on further borrowings and security interests, merger or consolidation, acquisitions, guarantees, sales of assets other than in the normal course of business, leasing and payment of dividends. The Company's ability to make payments on the indebtedness depends on the ability to generate cash. Failure to generate sufficient cash flow may result in a violation of financial covenants and default under the Company's debt agreements, and make it more difficult to obtain financing on terms that are acceptable, or at all. Management cannot assure that the Company's future cash flow would be sufficient to fully repay borrowings under the outstanding debt instruments, either upon maturity or upon an event of default, or that the Company would be able to extend, refinance or restructure the payments on those debt instruments.

The level of debt makes the Company more sensitive to the effects of economic downturns; the level of debt and provisions in the debt agreements could limit the Company's ability to react to changes in the economy or industry.

The level of debt makes the Company more vulnerable to changes in the results of operations. The Company's level of debt could have other negative consequences, including the following:

- Limiting the Company's ability to borrow money or sell stock for working capital, capital expenditures, debt service requirements or other general corporate purposes;
- Limiting the Company's flexibility in planning for, or reacting to, changes in operations, business or the industries in which the Company competes; and

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- Leverage may place the Company at a competitive disadvantage by limiting its ability to invest in the business or in further research and development.

In addition, the Company's asset based credit and security agreement contains covenants that limit the flexibility in planning for or reacting to changes in the business and industry, including limitations on incurring additional indebtedness, making investments, granting liens and merging or consolidating with other companies. Complying with these covenants may impair the Company's ability to finance the future operations or capital needs or to engage in other favorable business activities.

The Company may from time to time assess alternate ways to generate value for shareholders, including reviewing opportunities that may lead to acquisitions, dispositions or other strategic that may disrupt the business and divert management's attention, cause the Company to incur additional costs, debt or issue equity securities and adversely impact its results of operations and financial condition.

The Company may periodically assess alternate ways to generate value for shareholders, including reviewing opportunities that may lead to acquisitions, dispositions or other strategic transactions. It also may choose to invest in the development, either alone or with a strategic customer, of products or technologies from time to time. Such activities may divert management's attention, increase short term costs, require capital expenditures or result in an inability to realize the expected benefits from such activities. Any acquisitions will require the assimilation of the operations, products and personnel of the acquired businesses or products and the training and motivation of employees and exposure to unexpected liabilities of the acquired company. The Company also may have to, or choose to, incur additional costs for experts and other advisors, incur debt or issue equity securities to investigate and/or to pay for any future acquisitions, dispositions or other strategic transactions. Financing for such activities may not be available to the Company or may be on terms that involve covenants and financial ratios that may restrict the Company's ability to operate its business. The issuance of common stock, preferred stock or other equity securities in connection with an acquisition or other business opportunity could be dilutive to the stockholders' holdings. The Company cannot give any assurance that any such acquisitions, dispositions or other strategic transactions will not adversely impact our operating results or ultimately become profitable. The Company is not currently party to any agreements, written or oral, for the acquisition or disposition of any company, product or technology.

Medical devices are subject to extensive governmental regulations relating to the manufacturing, labeling and marketing of such products and failure to comply with such regulations may adversely impact the Company's operations and results of operations.

The medical device components the Company manufactures for its machining customers are subject to regulation by the FDA in the United States and other governmental authorities internationally. The process of obtaining regulatory approvals to market a medical device can be costly and time consuming for the Company's customers and approvals might not be granted for future products on a timely basis, if at all. Any such approvals may delay the Company's ability to commence production of a new or modified product. Under FDA regulations such products and the Company's manufacturing facilities are subject to periodic inspections by the FDA to determine compliance with the quality system and medical device reporting regulations and other requirements. If the Company fails to fully comply with applicable regulatory requirements, the Company or its customers may be subject to a range of sanctions, including warning letters, product recalls and the suspension of product manufacturing, monetary fines and criminal prosecution.

Economic uncertainty, as well as impact of healthcare reform legislation, may reduce patient demand for knee or other joint replacement procedures. If there is not sufficient patient demand for the procedures for which orthopedic implant products are used, customer demand for the Company's orthopedic implant components and instruments would likely drop, and its business, financial condition and results of operations could be harmed.

The orthopedics industry in which the Company's machining customers operate is vulnerable to economic trends and the impact of healthcare reform legislation. If joint replacement procedures are deemed to be elective procedures, the cost of the procedure may not be fully covered by or reimbursable through government, including Medicare or Medicaid, or private health insurance. In times of economic uncertainty or recession, individuals may reduce the amount of money that they spend on deferrable medical procedures, including joint replacement procedures. Economic downturns in the United States and international markets could have an adverse effect on demand for the Company's orthopedic implant components and instruments. In addition, these customers may be impacted by current or future executive orders and legislative actions impacting healthcare reform.

Failure to comply with Quality System Regulations or industry standards could result in a material adverse effect on the Company's business and results of operations.

The Company's Quality Management System complies with the requirements of ISO 13485:2003 and ISO 9001:2008. In addition the Company has registered its manufacturing facilities under ITAR and with the FDA. If the Company is not able to comply with the Company's Quality Management System or industry-defined standards, it may not be able to fill customer orders to the satisfaction of its customers. Failure to produce products compliant with these standards could lead to a loss of customers which would have an adverse impact on the Company's business and results of operations. Violations of the ITAR, FDA and other regulations may subject the Company to significant fines or penalties, which could have an adverse impact on the Company's results of operations. The

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Company is preparing for the changes in ISO Quality Standards which become effective in 2018 and expects to maintain and enhance its quality system. It's inability to do so may adversely impact the Company's results of operations.

If trade secrets are not kept confidential, the secrets may be used by others to compete against the Company.

The Company relies on trade secrets to protect its proprietary processes and there are no assurances that others will not independently develop or acquire substantially equivalent technologies or otherwise gain access to the proprietary process. The meaningful protection of such proprietary technology cannot be guaranteed. The Company relies on confidentiality agreements with its employees. Remedies for any breach by a party to these confidentiality agreements may not be adequate to prevent such actions. Failure to maintain trade secret protection, for any reason, could have a material adverse effect on the Company.

The Company is subject to stringent environmental regulations.

The Company's manufacturing operations are subject to a variety of federal, state and local requirements governing the protection of the environment. These environmental regulations include those related to the use, storage, handling, discharge and disposal of toxic or otherwise hazardous materials used in or resulting from the Company's manufacturing processes. Failure to comply with environmental laws could subject the Company to substantial liability or force the Company to significantly change its manufacturing operations. In addition, under some of these laws and regulations, the Company could be held financially responsible for remedial measures if its properties are contaminated, even if it did not cause the contamination.

A product liability suit could adversely affect the Company's operating results.

The testing, manufacturing, marketing and sale of the customer's and Company's medical devices and/or components, including orthopedic implant components and instruments, as well as components for the military and law enforcement industry, entail the inherent risk of liability claims or product recalls. If the Company's customers are involved in a lawsuit, it is possible that the Company would also be named. Although the Company maintains product liability insurance, coverage may not be adequate. Product liability insurance is expensive, and in the future may not be available on acceptable terms, if at all. In addition, the Company may incur significant legal expenses and damage to the Company's reputation in the event of any such claim regardless of whether the Company is found to be liable. A successful product liability claim or product recall could have a material adverse effect on the business, financial condition, and ability to market the Company's products and services in the future.

The effect of comprehensive U.S. tax reform legislation on the Company, whether adverse or favorable is uncertain.

On December 22, 2017, President Trump signed into law H.R. 1, "An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018" (informally titled the "Tax Cuts and Jobs Act"). Among a number of significant changes to the U.S. federal income tax rules, the Tax Cuts and Jobs Act (the "Act") reduces the marginal U.S. corporate income tax rate from 35% to 21%, limits the deduction for net interest expense, limits the deduction for net operating losses and eliminates net operating loss carrybacks, modifies or repeals many business deductions and credits, shifts the United States toward a more territorial tax system, and imposes new taxes to combat erosion of the U.S. federal income tax base. The Company's net deferred tax assets and liabilities will be revalued at the newly enacted U.S. corporate rate, and the impact will be recognized in tax expense in the year of enactment. The Company continues to examine the impact this tax reform legislation may have on its business. However, the effect of the Act on the Company and the Company's customers, whether adverse or favorable, is uncertain, and may not become evident for some period of time.

The market price of the Company's common stock is volatile.

The market price of the Company's common stock has in the past been, and may in the future continue to be, volatile. A variety of events may cause the market price of the Company's common stock to fluctuate significantly, including, but not limited to, quarter to quarter variations in operating results, adverse or positive news reports or public announcements and market conditions within the Company's industry. Due to the relatively small public float for the Company's common stock, trading of such shares may have a disproportionate effect on the stock price. Trading in the Company's stock or market fluctuations may adversely affect the price of the Company's common stock.

The Company could be negatively affected as a result of the actions of activist or hostile stockholders.

The Company could be negatively affected as a result of shareholder activism, which could cause the Company to incur significant expense, hinder execution of its business strategy and impact the trading value of the Company's stock. Shareholder activism, which could take many forms or arise in a variety of situations, has been increasing in publicly traded companies in recent years. Shareholder activism, including potential proxy contests, requires significant time and attention by management and the Board of Directors, potentially interfering with the Company's ability to execute its strategic plan. Additionally, such shareholder activism could give rise to perceived uncertainties as to the Company's future direction, adversely affect its relationships with key executives, customers and other business partners, or make it more difficult to attract and retain qualified personnel. Also, the Company has been, and may in

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the future be, required to incur significant legal fees and other expenses related to activist shareholder matters. Any of these impacts could materially and adversely affect the Company and its operating results.

The Company could be adversely affected by information systems interruptions, cybersecurity attacks or other disruptions which could have a material adverse effect on our business and result of operations.

We depend upon information technology infrastructure, including network, hardware and software systems to conduct our business. Despite our implementation of network and other cybersecurity measures, our information technology system and networks could be disrupted or experience a security breach from computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems. Our security measures may not be adequate to protect against highly targeted sophisticated cyber-attacks, or other improper disclosures of confidential and/or sensitive information. Additionally, we may have access to confidential or other sensitive information of our customers, which, despite our efforts to protect, may be vulnerable to security breaches, theft, or other improper disclosure, any of which could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

The Company may be exposed to potential risks relating to internal control over financial reporting.

As required by Section 404 of the Sarbanes-Oxley Act of 2002 (“SOX”), the SEC adopted rules requiring public companies to include a report of management on the Company’s internal control over financial reporting in their annual reports, including Form 10-K. In addition, if a reporting company is an accelerated filer or a large accelerated filer (as defined by the Exchange Act), the independent registered public accounting firm auditing a reporting Company’s financial statements must also attest to and report on the reporting company’s internal control over financial reporting as well as the operating effectiveness of the reporting company’s internal control. The Company was only subject to the management evaluation and review portion of these requirements for the fiscal year ended December 31, 2017. The Company’s failure to satisfy the requirements of Section 404 of SOX on an ongoing, timely basis could result in the loss of investor confidence in the reliability of the Company’s financial statements, which in turn could harm the Company’s business and negatively impact the trading price of the Company’s common stock. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm the Company’s operating results or cause the Company to fail to meet its reporting obligations.

Failure to comply with the listing requirements of the NYSE American could lead to the commencement of delisting proceedings in accordance the NYSE American’s Company Guide. Delisting could limit investors’ ability to effect transactions in the Company’s securities and subject the stock to additional trading restrictions.

The Company’s common stock is listed on the NYSE American, a national securities exchange. To maintain such listing, the Company is required to meet the continued listing requirements of the NYSE American as set forth in its Company Guide. If the Company is unable to maintain the listing of its stock on the NYSE American or another exchange for failure to comply with the continued listing requirements, including timely filing of Exchange Act reports and compliance with the NYSE American’s corporate governance requirements, the Company and its security holders could face significant material adverse consequences including a limited availability of market quotations for its stock and a decreased ability to issue additional securities or obtain additional financing in the future.

Item 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

Item 2. PROPERTIES

The manufacturing facilities and offices of the Company are located in two buildings in an industrial area in Fitchburg, Massachusetts. The first building consists of an approximately 22,000 square foot, six story building. The second building is over 94,000 square feet. The property on which the two buildings are situated is subject of a mortgage in favor of the Company’s asset based lender entered into in December 2017. See Note 5 to the consolidated financial statements. The Company believes its current facilities are sufficient to meet current and future production needs through the fiscal year ending December 31, 2018. Additionally, the Company owns two unoccupied buildings in the complex with a total of approximately 52,000 square feet.

In January 2016, the Company entered into a Purchase and Sale Agreement (the “Agreement”) with a Buyer for the sale of the two unoccupied buildings and land. Since that date, the Company has entered into four amendments to the Agreement. The amendments extended the term of the agreement, permitted assignment of the Buyer’s rights under the Agreement to a third party, provided for the payment of extension fee and other matters. In January 2018, the Company was notified that the National Park Service of the Department of the Interior designated the area in which the buildings are located as a Historic District, which will enable the Buyer to move forward with securing historical tax credits as agreed between the Parties. The closing under the Agreement is subject to permitting and approvals from the City of Fitchburg and the Commonwealth of Massachusetts and is expected to take place by the end of 2018.

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Item 3. LEGAL PROCEEDINGS

In the ordinary course of its business, the Company is involved in various legal proceedings involving a variety of matters. The Company does not believe there are any pending legal proceedings that will have a material impact on the Company's financial position or results of operations.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II**Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

The Company's common stock has been listed on the NYSE American since 1992 and traded under the ticker symbol HRT until March of 2017 when the Company changed its ticker symbol to MICR in conjunction with the Company name change from Arrhythmia Research Technology, Inc. to Micron Solutions, Inc.

The following table sets forth, for the periods indicated, the high, low and quarter end sale prices per share of common stock as quoted by the NYSE American.

Year Ended December 31, 2017	High	Low	Close
1st Quarter	\$ 4.50	\$ 3.59	\$ 4.02
2nd Quarter	4.23	3.60	3.90
3rd Quarter	4.29	3.19	3.80
4th Quarter	3.79	3.21	3.50
Year Ended December 31, 2016	High	Low	Close
1st Quarter	\$ 5.45	\$ 3.55	\$ 4.25
2nd Quarter	4.83	3.52	4.40
3rd Quarter	4.68	3.47	4.19
4th Quarter	4.44	3.56	3.80

Holders

As of March 26, 2018, the number of holders of the Company's common stock is estimated to be in excess of 1,500, including beneficial and record holders of our common stock.

Dividend Policy

No dividends were declared or paid in 2017 or 2016. Future determination as to the payment of cash dividends, if any, will be at the discretion of the Board of Directors and will be dependent upon the Company's financial condition, results of operations, capital requirements, potential acquisitions, and other such factors as the Board of Directors may deem relevant, including any restrictions under any credit facilities in place now or in the future. The Company's asset based credit and security agreement provides that the Company shall not declare or pay any dividend.

Item 6. SELECTED FINANCIAL DATA

Not Applicable.

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

The following discussion of the Company's results of operations and financial condition should be read in conjunction with the consolidated financial statements and notes pertaining to them that appear elsewhere in this Form 10-K. Any forward-looking statements made herein are based on current expectations of the Company that involve a number of risks and uncertainties and should not be considered as guarantees of future performance. These statements are made under the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as "expect," "anticipate," "believe," "intend," "plans," "predict," or "will". Although the Company believes that expectations are based on reasonable assumptions, management can give no assurance that the expectations will materialize. Many factors could cause actual results to differ materially from the Company's forward-looking statements. These factors include those contained in more detail in Item 1A, "Risk Factors". The Company is under no obligation and does not intend to update, revise or otherwise publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of any unanticipated events.

Results of Operations

The following table sets forth, for the periods indicated, the percentages of the net sales represented by certain items reflected in the Company's statements of operations.

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2017	2016	2017	2016
Net sales	100.0	100.0	100.0	100.0
Cost of sales	87.6	90.5	88.6	85.2
Gross profit	12.4	9.5	11.4	14.8
Selling and marketing	3.7	5.3	4.2	5.9
General and administrative	12.6	10.1	11.7	11.0
Research and development	0.6	0.5	0.6	0.5
Other expense	3.5	0.4	1.7	1.1
Loss before income taxes	(8.0)	(6.8)	(6.8)	(3.7)
Income tax provision	—	—	—	—
Net loss	(8.0) %	(6.8) %	(6.8) %	(3.7) %

Net Sales

Net sales	2017	2016	\$ Change	% Change
Year ended December 31,	\$ 20,102,662	\$ 19,638,217	\$ 464,445	2.4%

The increase in consolidated net sales for 2017 versus 2016 was due primarily to increased net sales of sensors, as well as an increase in orthopedic implant components and instruments, partly offset by a decrease in tooling sales as well as a decrease in net sales of thermoplastic injection molding.

The increase in net sales was largely due to an 11.5% increase in net sales of sensors for the year ended December 31, 2017 when compared to the same period in the prior year. The increase in net sales was due primarily to a 15.6% increase in production volume, to the highest in the Company's history. The increase in net sales was also due in part to changes in supply agreements with certain foreign customers, in the third and fourth quarter of 2016, which resulted in a change in the timing of the title transfer of goods.

The increase in net sales due to volume was partly offset by the impact of customer mix, product mix and competitive pricing. Silver surcharge billed increased 14.4% due largely to the increased volume.

Net sales of orthopedic implant components and instruments for the year ended December 31, 2017 increased less than 1% when compared to the same period in the prior year. The increase in net sales was due primarily to new business from new customers. The Company manufactured and shipped new surgical instrumentation components including cutting and drill guides. The Company also fulfilled orders of a new hip stem line, new tibia trays, new wrist plates, new rib plates, and other orthopedic components. The increase was largely offset by reduced demand of a personalized femoral component line from one customer who substantially completed a vertical implementation strategy in 2017. The Company also received new orders for, and resumed shipping of, a uni-femoral product line which had been previously paused by a large orthopedic OEM.

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The increase in net sales was partly offset by a 2.8% decrease in net sales of thermoplastic injection molding for the year ended December 31, 2017 when compared to 2016. The decrease was due primarily to lower sales of medical components to two customers in 2017 when compared to 2016. Additionally, the increase in net sales was partially offset by a 39.3% decrease in tooling net sales due largely to the 2016 sale of a large tool to the Company's largest customer.

Gross Profit

Gross profit	2017	2016	\$ Change	% Change
Year ended December 31,	\$ 2,292,378	\$ 2,898,691	\$ (606,313)	(20.9)%
As a percentage of sales	11.4%	14.8%		

The decrease in consolidated gross profit for the year ended December 31, 2017 versus 2016 was due to lower gross profit from orthopedic implant components and instruments and well as from thermoplastic injection molding, partly offset by increased gross profit from sensors.

The decrease in gross profit was due in part to a 30.1% decrease in gross profit from orthopedic implant components and instruments. The decrease was due in part to aggressive initial pricing to secure new customers, as well as the impact of reworking many of the related parts, as the Company refined its production process in the first half of 2017. The increased costs included costs related to increased scrap, tooling, labor, rework, expediting charges from suppliers, shift premiums and overtime, in order to meet customer delivery requirements. The decrease was also due in part to decreased sales due to lower demand from two customers, as noted above. Gross profit as a percentage of sales from orthopedic implant components and instruments decreased 6.5 percentage points due to the impact of the aggressive pricing and reworking of parts.

The decrease in gross profit was also due to a 12.1% decrease in gross profit from thermoplastic injection molding due primarily to lower demand from customers in the medical device industry as well as customer and product mix. Gross profit as a percentage of sales from thermoplastic injection molding decreased 3.2 percentage points due primarily to customer and product mix.

Partly offsetting the decreases above was an 11.5% increase in gross profit from sensors. The increase in gross profit was due to an increase in net sales from record volumes in 2017. Gross profit as a percentage of sales from sensors remained unchanged from the prior year.

The decrease in gross profit for the year ended December 31, 2017 was also due in part to a 9.6% increase in expenses for other indirect manufacturing overhead departments. The higher expenses were due largely to higher quality and mold shop maintenance expenses. Other manufacturing overhead as a percentage of sales increased to 9.7% for the year ended December 31, 2017 as compared to 9.1% in the same period last year.

Selling and Marketing

The Company's consolidated selling and marketing expenses decreased to \$841,845, or 4.2% of net sales, in 2017 from \$1,153,044, or 5.9% of net sales, in 2016, a decrease of \$311,199 or 27.0%. For the year ended December 31, 2017, the decrease was primarily due to decreased compensation of \$268,923 as a result of the departure of a sales person and customer service representative in the first quarter of 2017 and an additional departure of a sales person in the third quarter of 2017. Additionally, commissions were lower by \$65,065 due in part to fewer sales persons and the mix of commissionable parts. Travel expenses were also lower by \$34,125 due in part to fewer sales people. Partly offsetting these decreases was an increase in marketing and advertising expenses of approximately \$35,000 related to trade shows, web site enhancements and the development of an online marketing and lead generation program.

General and Administrative Expenses

The Company's consolidated general and administrative expenses increased to \$2,357,909, or 11.7% of net sales, in 2017 compared to \$2,151,244, or 11.0% of net sales, in 2016; an increase of \$206,665 or 9.6%. The increase in general and administrative expenses is due in part to non-recurring charges of \$77,606 related to outside consulting services in the third quarter of 2017 and \$15,467 of other non-recurring charges in the fourth quarter of 2017. The increase is also due in part to an increase of \$119,499 of compensation expense due in part to new hires in IT, administration and accounting as well as an increase in benefit costs. Directors' fees increased \$37,604 compared to 2016 primarily as a result of the Board members foregoing their fees for the second quarter of 2016. General and product liability insurance increased \$27,822 due in part to increased premiums related to military and law enforcement operations and directors' and officers' insurance. Bad debt expense increased \$29,556 due primarily to the prior year impact of insurance proceeds received related to collections of an outstanding insured receivable. Additionally, accounting and other professional fees increased \$66,187 due to increased external audit, financial report writing and outsourcing the environmental, health and safety function.

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The increases above were partially offset by a decrease of \$38,286 in legal expenses. The decrease in legal fees was due in part to the prior year impact of corporate governance and shareholder relations matters as well as general employment matters, partly offset by increased legal fees related to banking. The increase in general and administrative expenses was also partially offset by \$51,600 of recruiting agency fees related to the replacement of three positions in the first quarter of 2016. Investor relations expenses also decreased \$19,767 when compared to the prior year.

Research and Development

The Company's consolidated research and development expenses increased to \$111,014, or 0.6% of net sales in 2017 from \$97,235, or 0.5% of net sales in 2016; an increase of \$13,780, or 14.2%. The increase is due largely to an increase in compensation expense.

Other Income (Expense)

Other expense, net, was \$337,666 in 2017 compared to \$209,631 in 2016, an increase of \$128,035. Interest expense was \$395,085 in 2017 compared to \$259,762 in 2016, an increase of \$135,323. The increase in interest expense was due in part to a prepayment penalty of \$39,843 related to the discharge of term loans with the Company's previous lender upon entering into the asset based credit and security agreement. The increase in interest expense was also due in part to the non-cash write off of \$24,360 of deferred financing fees related to the Company's previous credit facility as well as non-cash amortization of debt issuance costs of \$8,994 related to the discharge of the subordinated debt. Interest expense also increased as a result of higher balances drawn on the revolver.

The increase in other expense, net was also partly due to a decrease in other income of \$12,750, due in part to the impact of a prior year increase in the value of real estate held for sale of \$23,750 partly offset by an increase in extension fees related to the real estate held for sale.

Income Tax Provision

The tax provisions for the years ended December 31, 2017 and 2016 are attributable to the U.S. federal and state income taxes. The Company's combined federal and state effective income tax rate was 0% and 0% in 2017 and 2016, respectively, due to the impact of deferred tax assets reserved for with a valuation allowance.

Earnings Per Share

Consolidated basic and diluted loss per share for the year ended December 31, 2017 was \$0.48 per share compared with loss per share of \$0.25 for the year ended December 31, 2016, an increase in loss per share of \$0.23 per share. The increased loss per share for the year ended December 31, 2017, is due largely to a decrease of \$606,313 in gross profit despite a \$464,445 increase in net sales compared to the prior year period.

Off-Balance Sheet Arrangements

Lease expense under all operating leases was approximately \$24,954 and \$20,453 for the years ended December 31, 2017 and 2016, respectively. Future minimum lease payments for the years ending December 31 are as follows:

2018	\$ 19,191
2019	17,191
2020	17,191
2021	10,028

Liquidity and Capital Resources

Working capital was \$2,548,692 at December 31, 2017 as compared to \$1,530,773 at December 31, 2016 an increase of \$1,017,919. The increase is primarily due to increases in cash and cash equivalents, restricted cash, accounts receivable and inventory. The increase in working capital is also due to decreases in accounts payable, accrued expenses and other current liabilities, current portion of term debt, and the current portion of deferred revenue. The increase in working capital was partially offset by a decrease in prepaid expenses and other current assets, an increase in the borrowings under the asset based credit and security agreement and an increase in customer deposits. Also offsetting the increase in working capital was the reclassification of subordinated promissory notes from long-term liabilities to current liabilities as a part of the discharge of the promissory notes in conjunction with entering into the asset based credit and security agreement (see Note 5 to the consolidated financial statements).

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Cash on hand was \$956,988 and \$380,381 at December 31, 2017 and 2016, respectively. Substantially all of these funds are maintained in bank deposit accounts. Cash on hand consisted of cash and cash equivalents of \$606,988 and restricted cash of \$350,000 at December 31, 2017 compared to cash and cash equivalents of \$380,381 and restricted cash of \$0 at December 31, 2016, increases of \$226,607 and \$350,000, respectively. The increase in cash and cash equivalents is due in part to \$250,000 in proceeds from the asset based credit and security agreement for the purpose of providing adequate float for the transitioning of operating accounts from the previous lender. The \$350,000 increase in restricted cash is due to proceeds of \$450,000 from the asset based credit and security agreement for the purpose of paying off subordinated promissory notes. One promissory note with a principal balance of \$100,000 was discharged on December 29, 2017. The remaining five notes aggregating \$350,000 were discharged on January 2, 2018.

Trade accounts receivable, net of allowance for doubtful accounts were \$2,595,248 and \$2,276,608 at December 31, 2017 and December 31, 2016, respectively, an increase of \$318,640. The increase is primarily due to the impact of the timing of shipments at the end of 2017 primarily related to orthopedic implant components and instruments.

Inventories were \$3,413,199 at December 31, 2017 as compared to \$3,060,085 at December 31, 2016, an increase of \$353,114 due largely to an increase in work-in-process inventory related to tooling orders.

Accounts payable decreased \$209,912 due to the timing of disbursements for the year ended December 31, 2017 as compared to December 31, 2016. Accrued expenses and other current liabilities decreased \$13,296 while the current portion of deferred revenue decreased \$139,155 as certain deferred tooling became fully amortized to revenue. Customer deposits increased \$218,334 primarily as a result of large tooling deposits for two customer projects.

Capital equipment expenditures were \$924,621 in 2017 as compared to \$1,354,091 in 2016. The decrease in capital spending is due primarily to higher 2016 investments in machinery and equipment primarily for the contract manufacturing of components for orthopedic implants and instruments as well as thermoplastic injection molding.

On December 29, 2017 the Company entered into a three-year \$9,500,000 asset based credit and security agreement (the "Agreement"), with a Massachusetts trust company, replacing the credit facility and forbearance agreement with the Company's previous lender. The Agreement also provided funds for discharging the outstanding subordinated promissory notes (see Note 5 to the consolidated financial statements).

The Agreement includes a revolving line of credit of up to \$5.0 million ("Revolver"), a machinery and equipment term loan of \$2.5 million ("Equipment Loan") and a real estate term loan of \$2.0 million ("Real Estate Loan" and together with the "Equipment Loan" the "Term Loans").

At December 31, 2017 the Company's total debt, net of debt issuance costs, was \$6,575,241 as compared to \$4,778,637 at December 31, 2016, an increase of \$1,796,604 or 37.6%. The increase is due largely to \$1,232,176 in net borrowing from the Company's revolver from its prior lender. The revolver had a balance of \$3,017,971 when it was refinanced in December 2017 through the Company's asset based credit and security agreement as noted above.

The total outstanding debt at December 31, 2017 was comprised of outstanding principal amounts of \$4,346,194 of Term Loans, net of debt issuances costs, \$1,879,047 on the Revolver, and \$350,000 of subordinated promissory notes as discussed in more detail below.

The Revolver provides for borrowings of up to 85% or 90% on certain accounts receivable and up to 60% or 80% of certain eligible inventory. The interest rate on the Revolver is based upon either the Wall Street Journal prime rate plus 0.5%, or daily one-month LIBOR plus 3.25% at the Company's discretion (4.875% at December 31, 2017).

The Equipment Loan requires monthly principal payments of approximately \$29,762, payable on the first day of each month commencing February 1, 2018. The Equipment Loan is based upon an 84 month amortization with a balloon payment of approximately \$1,458,333 due and payable in full upon maturity on December 29, 2020. The outstanding balance on the Equipment Loan was \$2,500,000 as of December 31, 2017.

The Real Estate Loan requires monthly principal payments of approximately \$8,333, payable on the first day of each month commencing February 1, 2018. The Real Estate Loan is based upon a 240 month amortization with a balloon payment of approximately \$1,708,333 due and payable in full upon maturity on December 29, 2020. The outstanding balance on the Real Estate Loan was \$2,000,000 as of December 31, 2017.

The interest rate on the Terms Loans is based upon either the Wall Street Journal prime rate plus 0.75%, or daily one-month LIBOR plus 3.5%, at the Company's discretion (5.125% at December 31, 2017).

This three-year Agreement contains covenants related to various matters including certain financial covenants, prohibitions on further borrowings and security interests, merger or consolidation, acquisitions, guarantees, sales of assets other than in the normal

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course of business, leasing, and payment of dividends. The lender has a security interest in all assets and a mortgage encumbering certain real property. The Company was in compliance with all bank covenants as of December 31, 2017.

At December 31, 2016, the Company had a multi-year credit facility with a Massachusetts based bank consisting of a revolving line of credit (the "revolver"), a commercial term loan and an equipment line of credit. That credit facility was replaced by the asset based credit and security agreement on December 29, 2017.

In January 2013, the Company entered into two equipment notes totaling \$272,500 with a financing company to acquire production equipment. The notes bear interest at 4.66% and require monthly payments of principal and interest totaling approximately \$5,000 over the term of five years. The equipment note was paid in full as of December 31, 2017.

In December 2013, the Company completed a private offering in which the Company sold an aggregate of \$500,000 in subordinated promissory notes ("subordinated notes") and issued an aggregate of 100,000 warrants to purchase common stock. The unsecured subordinated notes required quarterly interest-only payments at a rate of 10% per annum for the first two years. Beginning in December 2015, the interest rate on the subordinated notes increased to 12% per annum. Three related parties participated in the private offering. See Note 5 to the consolidated financial statements.

In October 2016, the Company and six of the seven investors in the private offering, aggregating \$450,000 of the subordinated notes, including the three related parties holding \$250,000 of the subordinated notes, agreed to extend the maturity dates of the subordinated notes to December 31, 2018 at a reduced interest rate of 10% per annum. One investor did not extend the maturity date and that \$50,000 note was discharged at maturity in December 2016. In the fourth quarter of 2016, the Company calculated the incremental fair value of extending the expiration date of the subordinated notes and warrants and determined that the amendment represented a debt modification in accordance with the guidance outlined in ASC-470, "Debt". Using the Black-Scholes model, and the 10% test, the Company determined that the incremental fair value of the warrants to be \$18,310 which was recorded as a reduction against the subordinated notes and an increase in Additional Paid-in Capital in 2016.

The discount on the subordinated notes is being recognized as non-cash interest expense over the term of the subordinated notes. The Company recorded \$17,989 and \$27,186 for the years ended December 31, 2017 and 2016, respectively. The unamortized discount which is net against the outstanding balance of the subordinated notes was \$0 at December 31, 2017 and \$17,989 at December 31, 2016. The unamortized discount was fully amortized onto the balance sheet on December 29, 2017 as a result of the Company having entered into the asset based credit and security agreement which provided for the payment in full of the subordinated notes.

On December 29, 2017 through entering into the three-year asset based credit and security agreement, the Company obtained funds to discharge the remaining \$450,000 of subordinated debt. On December 29, 2017, the Company discharged one of the subordinated notes in the principal amount of \$100,000. The remaining five subordinated notes, totaling an aggregate principal amount of \$350,000, were discharged on January 2, 2018, including the notes held by the three related parties. The Company carried the \$350,000 as restricted cash at December 31, 2017 for this purpose.

The outstanding warrants were initially exercisable through December 2016 at an exercise price of \$3.51 per share. In October 2016, in connection with the extension of the maturity dates of the subordinated notes, the expiration date of the remaining 70,000 warrants was extended to December 31, 2018. The discharge of the subordinated notes as described above did not affect the maturity date of the warrants. The exercise price remained unchanged at \$3.51 per share. No warrants were exercised in 2017 or 2016. The 70,000 warrants, including 50,000 warrants held by related parties, remain unexercised at December 31, 2017. See Note 5 to the consolidated financial statements.

No dividends were declared or paid in 2017 or 2016.

The Company believes that cash flows from its operations, together with its existing working capital, increased booked orders, the asset based credit and security agreement and other resources, will be sufficient to fund operations at current levels and repay the next twelve months of debt obligations.

Summary of Changes in Cash Position

At December 31, 2017, the Company had cash on hand of \$956,988, an increase of \$576,607 from December 31, 2016. Cash on hand includes \$350,000 of restricted cash. Net cash used in operating activities in 2017 totaled \$236,823. Net cash used in investing activities in 2017 was \$919,328. Net cash provided by financing activities in 2017 totaled \$1,732,758. The net cash flows for the year ended December 31, 2017 are discussed in further detail below.

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Operating Cash Flows

Net cash used in operating activities in 2017 was \$236,823. The use of cash was largely due to the net loss of \$1,355,096. Cash was also used as a result of increases in inventory and accounts receivable as well as decreases in other non-current liabilities, current portion of deferred revenue, accounts payable and accrued expenses and other current liabilities. Additionally, net cash used was impacted by the non-cash gain on sale of fixed assets.

Net cash used in operating activities was partly offset by cash provided from decreases in prepaid expenses and other current assets, other non-current assets and an increase in customer deposits. In addition, operating activities was impacted by non-cash add-backs for depreciation and amortization of \$1,611,139, share-based compensation of \$136,653, non-cash interest expense of \$63,847 and an increase of \$10,000 in the allowance for doubtful accounts.

Investing Cash Flows

Net cash used in investing activities in 2017 was \$919,328, primarily for capital expenditures, largely for machinery and equipment for the contract manufacturing of orthopedic implants and instruments as well as thermoplastic injection molding.

Financing Cash Flows

Net cash provided by financing activities in 2017 was \$1,732,758. The increase in financing activities was due largely to \$1,232,176 in net borrowing from the Company's revolver from its prior lender. The revolver had a balance of \$3,017,971 when it was refinanced as part of the Company's asset based credit and security agreement as noted above.

The asset based credit and security agreement provided cash in the form of a \$2.5 million Equipment Loan, a \$2.0 million Real Estate Loan and a net borrowing of \$1,879,047 on the Revolver, including \$153,806 of debt issuance costs. These proceeds discharged the outstanding balances of the Company's revolver and term debt with its previous bank lender, totaling \$5,553,041, which included \$39,843 of prepayment penalties on the term debt. As part of the asset based credit and security agreement, the Company obtained \$450,000 in the form of restricted cash for the purpose of discharging the subordinated debt. One subordinated note in the principal amount of \$100,000 was discharged on December 29, 2017 while the remaining five notes totaling an aggregate principal amount of \$350,000 were discharged on January 2, 2018, including the subordinated notes held by the three related parties. See Note 5 to the consolidated financial statements.

Inflation

The Company believes that inflation in the United States or international markets has not had a significant effect on its results of operations. However, there has been considerable volatility in both energy and commodity prices, particularly the cost of silver.

Environmental Matters

Similar to many industrial processes, the Company's manufacturing processes utilize hazardous and non-hazardous chemicals, the treatment and disposal of which are subject to federal and state regulation. Since its inception, the Company has expended significant funds to train its personnel, install waste treatment and recovery equipment and retain independent environmental consulting firms to regularly review, monitor and upgrade its air and waste water treatment activities. The Company believes that the operations of its manufacturing facility are in compliance with currently applicable safety, health and environmental laws and regulations.

Based on the Company's analysis, the Company does not expect future costs in connection with environmental matters to have a material adverse effect on its financial condition, result of operations or liquidity aside from the cost of regulatory compliance and maintaining certifications and processes related to compliance with environmental regulations.

Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions and estimates that affect the amounts reported. Note 2 to the consolidated financial statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Some of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of the Company's financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on the Company's financial condition and results of operations. Specifically, critical accounting estimates have the following attributes: 1) the Company is required to make assumptions about matters that are highly uncertain at the time of the estimate; and 2) different estimates the Company could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on the

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Company's financial condition or results of operations. Estimates and assumptions about future events and their effects cannot be determined with certainty. The Company bases its estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as the Company's operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within its control and will not be known for prolonged periods of time. These uncertainties are discussed in Item 1A, "Risk Factors" above. Based on a critical assessment of its accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that the Company's consolidated financial statements are fairly stated in accordance with generally accepted accounting principles, and present a meaningful presentation of the Company's financial condition and results of operations.

Management believes that the following are critical accounting policies:

Revenue Recognition

Revenue is recorded when all criteria for revenue recognition have been satisfied. Revenue is recognized in the period when persuasive evidence of an arrangement with a customer exists, the products are shipped and title has transferred or when exclusive control has been transferred to the customer, the price is fixed or determinable and collection is probable. The Company has entered into supply agreements with certain foreign customers where revenue is not recognized when the product is shipped but instead is recognized when the customer consumes the product and title is transferred.

The Company enters into arrangements containing multiple elements which may include a combination of the sale of molds, tooling, engineering and validation services ("tooling") and production units. The Company has determined that certain tooling arrangements, and the related production units, represent one unit of accounting, based on an assessment of the respective standalone value. When the Company determines that an arrangement represents one unit of accounting, the revenue is deferred over the estimated product life-cycle, based upon historical knowledge of the customer, which is generally three years. The Company carries the sales and tooling costs, associated with the related arrangement, as deferred revenue and other current and non-current assets, respectively, on the Company's balance sheet. As the deferred revenue is amortized to sales, the associated prepaid tooling costs are amortized to cost of sales.

The Company cannot effectively predict short-term or long-term production volume in a consistent and meaningful manner due to the nature of these molds and associated products. Therefore, the Company is unable to account for the transactions under the Units of Production method and management has determined the most appropriate amortization method to be the Straight-Line method.

The Company may from time to time, at the customer's request, enter into a bill and hold arrangement. The Company evaluates the nature of the arrangement including, but not limited to (i) the customer's business purpose, (ii) the transfer of risk of ownership to the customer and (iii) the segregation of inventory, along with other elements in accordance with the Company's revenue recognition policy and relevant accounting guidance.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers" ("ASU 2014-09"). The core principle behind ASU 2014-09 is that an entity should recognize revenue in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering goods and services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract and recognizing revenue when the entity satisfies the performance obligations. This ASU allows two methods of adoption; a full retrospective approach where historical financial information is presented in accordance with the new standard, and a modified retrospective approach where this ASU is applied to the most current period presented in the financial statements.

The Company has adopted ASU 2014-09 effective January 1, 2018 using the modified retrospective approach. While the Company has made substantial progress in its implementation analysis, it is continuing to evaluate certain aspects of the standard. The Company's analysis includes reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements under the new standard. The Company has reviewed a sample of supply and manufacturing contracts with customers that are believed to represent the Company's revenue streams and continues to review additional contracts to finalize a new accounting policy. The determination of the impact of adoption of this ASU on the financial condition, results of operations, cash flows and disclosures is ongoing, and, as such, the Company is not able to reasonably estimate the quantitative effect that the adoption of the new standard will have on its financial statements.

Based on our ongoing assessment, ASU 2014-09 will affect the timing of certain revenue related transactions primarily resulting from the earlier recognition of the Company's tooling sales and costs. Upon adoption of ASU 2014-09 tooling sales and costs will be recorded over time as the Company satisfies its performance obligations. Similarly, the Company manufactures parts that have no alternative use to the Company (since the parts are custom made to specific customer orders), and the Company believes for certain customers there is a legally enforceable right to payment for performance completed to date on these manufactured parts. For those

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manufactured parts that meet these two criteria, the Company will recognize revenue over time. The Company has determined that sales of certain propriety products will continue to be recorded at the point in time of shipment as the Company does meet any of the over-time revenue recognition criteria for the related contracts.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable represent amounts invoiced by the Company. Management maintains allowance for doubtful accounts based on information obtained regarding individual accounts and historical experience. Amounts deemed uncollectible are written off against the allowance for doubtful accounts. Bad debts have not had a significant impact on the Company's financial position, results of operations and cash flows.

The Company insures receivables for certain customers based upon several factors. Such factors include the customer's payment terms, ordering patterns and volume requirements, the customer's payment history, or general economic conditions of the region in which a customer is located.

Inventory and Inventory Reserves

The Company values its inventory at the lower of average cost or net realizable value, and cost is determined using first in first out (FIFO) or weighted average cost. The Company reviews its inventory for quantities in excess of production requirements, obsolescence and for compliance with internal quality specifications. A review of inventory on hand is made at least annually and obsolete inventory may be disposed of and/or recycled. Any adjustments to inventory would be equal to the difference between the cost of inventory and the estimated net market value based upon assumptions about future demand, market conditions and expected cost to distribute those products to market. The Company has entered into supply agreements with certain foreign customers to hold inventory at their warehouses.

Deferred Tax Assets

The Company assesses the realization of its deferred tax assets based upon a more likely than not criteria. The Company considers future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for valuation allowances. The Company recognizes the benefits of a tax position if that position is more likely than not to be sustained on audit, based on the technical merit of the position. As of December 31, 2017, the Company continues to maintain a valuation allowance against all of its deferred tax assets except for its AMT Credit carryforward, which is treated as a refundable attribute under the amendments to the federal tax laws enacted in December 2016 and is included in other assets on the Company's consolidated balance sheet.

Asset Impairment – Long-Lived Assets

The Company assesses the impairment of long-lived assets and intangible assets with finite lives annually or whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable. Based upon the annual review, the Company recorded an impairment charge of \$1,771 in 2017. In 2017, the Company determined that the trade name, Arrhythmia Research Technology, Inc., no longer provided any future economic benefit and recorded an impairment charge of \$1,771 for the remaining unamortized balance of the trade name. No impairment charges were recorded in 2016.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not Applicable.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item may be found on pages F-1 through F-24 of this Annual Report on Form 10-K.

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

None.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this annual report the Company's management, with the participation of the Company's principal executive officer and principal financial officer ("the Certifying Officers"), conducted evaluations of the Company's disclosure controls and procedures as defined under Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the

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“Exchange Act”). Based upon the evaluations, the Certifying Officers have concluded that as of December 31, 2017, the Company's disclosure controls and procedures were effective.

Management’s Report on Internal Control Over Financial Reporting

The Company's Certifying Officers are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act.

Internal control over financial reporting is a process designed by, or under the supervision of, the Certifying Officers and effected by the Company's Board of Directors, management and other personnel, 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 and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Company's assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that the Company's receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition or disposition of the Company's assets that could have a material effect on the financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. It is a process that involves human diligence and compliance and is subject to lapses in judgment or breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. While process safeguards can reduce risks, because of inherent limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis. 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.

The Company, under the supervision and with the participation of the Certifying Officers, has evaluated the effectiveness of the Company's internal control over financial reporting as of December 31, 2017 based upon the framework in Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on such evaluations, the Certifying Officers have concluded that the Company's internal control over financial reporting was effective as of December 31, 2017.

Changes in Internal Control Over Financial Reporting

During the three months ended December 31, 2017, there have been no changes in the Company’s internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2017 Annual Meeting of Stockholders.

Item 11. EXECUTIVE COMPENSATION

The information required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2017 Annual Meeting of Stockholders.

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

The information required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2017 Annual Meeting of Stockholders.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2017 Annual Meeting of Stockholders.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2017 Annual Meeting of Stockholders.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

We have filed the following documents as part of this report:

1. Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

Consolidated Financial Statements:

Balance sheets

Statements of operations

Statements of changes in shareholders' equity

Statements of cash flows

Notes to consolidated financial statements

2. Financial Statement Schedules

Schedules have been omitted because they are not required, not applicable, or the required information is otherwise included.

3. Exhibits

The Company hereby furnishes the exhibits listed on the attached exhibit index. Exhibits, which are incorporated herein by reference, may be inspected and copied at the public reference facilities maintained by the SEC at Room 1580, Washington, D.C. 20549. Copies of such material may be obtained by mail from the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549, at prescribed rates. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC at <http://www.sec.gov>. The Company maintains a web site that contains reports, proxy and information statements and other information electronically at the address <http://www.micronsolutionsinc.com>. Information on our website is not a part of this Annual Report on Form 10-K.

Item 16. FORM 10-K SUMMARY

Not applicable.

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.

MICRON SOLUTIONS, INC.

By: /s/ Salvatore Emma, Jr.
Salvatore Emma, Jr.,
President, Chief Executive Officer
March 26, 2018

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Salvatore Emma, Jr. and Derek T. Welch, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K for the year ended December 31, 2017, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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	Capacity	Date
<u>/s/ Salvatore Emma, Jr.</u> Salvatore Emma, Jr.	President and Chief Executive Officer and Director (principal executive officer)	March 26, 2018
<u>/s/ Derek T. Welch</u> Derek T. Welch	Chief Financial Officer (principal financial and accounting officer)	March 26, 2018
<u>/s/ Jason R. Chambers</u> Jason R. Chambers	Chairman of the Board	March 26, 2018
<u>/s/ Marco F. Benedetti</u> Marco F. Benedetti	Director	March 26, 2018
<u>/s/ Rodd E. Friedman</u> Rodd E. Friedman	Director	March 26, 2018
<u>/s/ Robert A. Mello</u> Robert A. Mello	Director	March 26, 2018
<u>/s/ Andrei Soran</u> Andrei Soran	Director	March 26, 2018
<u>/s/ Paul F. Walter, MD</u> Paul F. Walter, MD	Director	March 26, 2018

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EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description of Exhibit</u>	<u>Page</u>
3.0	Certificate of Incorporation (incorporated by reference to the Company's Registration Statement on Form S-18 as filed with the Commission in April 1988, Registration Statement No. 33-20945-FW).	
3.1	Amended and Restated By-laws (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K as filed with the Commission on July 1, 2011).	
3.2	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q as filed with the Commission on August 13, 2015).	
3.3	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K as filed with the Commission on March 14, 2017).	
4.0	Form of Certificate evidencing shares of the Company's Common Stock (incorporated by reference to the Company's Registration Statement on Form S-18 as filed with the Commission in April 1988, Registration Statement No. 33-20945-FW).	
4.10*	2010 Equity Incentive Plan (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 as filed with the Commission on May 6, 2010, Registration Statement No. 333-166600).	
4.11	Form of Subordinated Note (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K as filed with the Commission on December 23, 2013).	
4.12	Form of Subordination Agreement (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K as filed with the Commission on December 23, 2013).	
4.13	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K as filed with the Commission on December 23, 2013).	
4.14	Form of Amended and Restated Subordinated Promissory Note (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K as filed with the Commission on October 17, 2016).	
4.15	Form of Amendment No. 1 to Warrant to Purchase Shares of Common Stock (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K as filed with the Commission on October 17, 2016).	
10.51	Loan and Security Agreement between UniBank for Savings and Micron Solutions, Inc. and Micron Products, Inc. dated March 29, 2013 (incorporated by reference to Exhibit 10.51 to the Company's Quarterly Report on Form 10-Q as filed with the Commission on July 1, 2013).	
10.61	Fourth Amendment to Loan and Security Agreement and Commercial Equipment Line of Credit Promissory Note dated June 19, 2015 (incorporated by reference to Exhibit 10.61 to the Company's Quarterly Report on Form 10-Q as filed with the Commission on August 13, 2015).	
10.62	Fifth Amendment to Loan and Security Agreement dated as of November 15, 2016 (incorporated by reference to Exhibit 10.62 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Commission on March 22, 2017).	
10.63	Commercial Term Promissory Note dated November 15, 2016 (incorporated by reference to Exhibit 10.63 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Commission on March 22, 2017).	
10.64	Commercial Equipment Line of Credit Promissory Note dated November 15, 2016 (incorporated by reference to Exhibit 10.64 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Commission on March 22, 2017).	
10.65*	Executive Incentive Plan (incorporated by reference to Exhibit 10.65 to the Company's Current Report on Form 8-K as filed with the Commission on December 6, 2016).	

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<u>10.66*</u>	<u>Employment Agreement between the Company and Salvatore Emma, Jr. dated as of January 1, 2017 (incorporated by reference to Exhibit 10.66 to the Company's Annual Report on Form 10-K for fiscal year ended December 31, 2016 as filed with the Commission on March 22, 2017).</u>	
<u>10.67*</u>	<u>Employment Agreement between the Company and Derek T. Welch dated as of January 1, 2017 (incorporated by reference to Exhibit 10.67 to the Company's Annual Report on Form 10-K for fiscal year ended December 31, 2016 as filed with the Commission on March 22, 2017).</u>	
<u>10.68</u>	<u>Sixth Amendment to Loan and Security Agreement dated June 16, 2017 (incorporated by reference to Exhibit 10.68 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 as filed with the Commission on August 11, 2017).</u>	
<u>10.69</u>	<u>Forbearance Agreement between UniBank for Savings, Micron Solutions, Inc. and Micron Products, Inc. dated September 29, 2017 (incorporated by reference to Exhibit 10.69 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017 as filed with the Commission on November 13, 2017).</u>	
<u>10.70**</u>	<u>Credit and Security Agreement between Micron Products, Inc. and Rockland Trust Company dated December 29, 2017.</u>	X-1
<u>10.71**</u>	<u>General Security Agreement between the Company and Rockland Trust Company dated December 29, 2017.</u>	X-2
<u>10.72**</u>	<u>Mortgage, Security Agreement and Financing Statement entered into by Micron Products, Inc. dated December 29, 2017.</u>	X-3
<u>10.73**</u>	<u>M&E Term Loan Note entered into by Micron Products, Inc. dated December 29, 2017.</u>	X-4
<u>10.74**</u>	<u>Real Estate Term Loan Note entered into by Micron Products, Inc. dated December 29, 2017.</u>	X-5
<u>10.75**</u>	<u>Revolver Note entered into by Micron Products, Inc. dated December 29, 2017.</u>	X-6
<u>10.76**</u>	<u>General Continuing Guarantee entered into by the Company dated as of December 29, 2017.</u>	X-7
<u>21</u>	<u>Subsidiaries (incorporated by reference to Exhibit 21.0 to the Company's Annual Report on Form 10-K for fiscal year ended December 31, 2010 as filed with the Commission on March 23, 2011).</u>	
<u>23.1**</u>	<u>Consent of Wolf & Company, P.C.</u>	X-8
<u>31.1**</u>	<u>Certification of the CEO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)</u>	X-9
<u>31.2**</u>	<u>Certification of the CFO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)</u>	X-10
<u>32.1**</u>	<u>Certification of the CEO pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	X-11
<u>32.2**</u>	<u>Certification of the CFO pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	X-12
<u>101.INS†</u>	<u>XBRL Instance Document</u>	
<u>101.SCH†</u>	<u>XBRL Taxonomy Extension Schema Document</u>	
<u>101.CAL†</u>	<u>XBRL Taxonomy Extension Calculation Linkbase Document</u>	
<u>101.PRE†</u>	<u>XBRL Taxonomy Extension Presentation Linkbase Document</u>	
<u>101.DEF†</u>	<u>XBRL Taxonomy Extension Definition Linkbase Document</u>	

* Indicates a management contract or compensatory plan required to be filed as an exhibit.

**Filed herewith

† XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

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**Micron Solutions, Inc.
and Subsidiary**

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Micron Solutions, Inc. and Subsidiary

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Micron Solutions, Inc. and Subsidiary (the "Company") as of December 31, 2017 and 2016, and the related consolidated statements of operations, changes in shareholders' equity, and cash flows for the years then ended and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

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 Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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/ WOLF & COMPANY, P.C.

We have served as the Company's auditor since 2013.

Boston, Massachusetts
March 26, 2018

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Consolidated Balance Sheets**

	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 606,988	\$ 380,381
Restricted cash	350,000	—
Trade accounts receivable, net of allowance for doubtful accounts of \$40,000 at December 31, 2017 and \$30,000 at December 31, 2016	2,595,248	2,276,608
Inventories	3,413,199	3,060,085
Prepaid expenses and other current assets	460,954	614,362
Total current assets	7,426,389	6,331,436
Property, plant and equipment, net	5,744,039	6,440,911
Assets held for sale, net	688,750	688,750
Intangible assets, net	55,133	30,093
Other assets	10,289	156,231
Total assets	\$ 13,924,600	\$ 13,647,421
Liabilities and Shareholders' Equity		
Current liabilities:		
Revolving line of credit	\$ 1,879,047	\$ 1,785,795
Equipment line of credit	—	102,500
Term notes payable, current portion	367,779	487,468
Subordinated promissory notes, current portion	350,000	—
Accounts payable	1,534,349	1,744,261
Accrued expenses and other current liabilities	320,065	333,361
Customer deposits	340,624	122,290
Deferred revenue, current	85,833	224,988
Total current liabilities	4,877,697	4,800,663
Long-term liabilities:		
Term notes payable, non-current portion	3,978,415	1,970,863
Subordinated promissory notes, non-current portion	—	432,011
Deferred revenue, non-current portion	—	156,953
Total long-term liabilities	3,978,415	2,559,827
Total liabilities	8,856,112	7,360,490
Commitments and Contingencies		
Shareholders' equity:		
Preferred stock, \$0.001 par value; 2,000,000 shares authorized, none issued	—	—
Common stock, \$0.01 par value; 10,000,000 shares authorized; 3,926,491 issued, 2,839,274 outstanding at December 31, 2017 and 3,926,491 issued, 2,816,639 outstanding at December 31, 2016	39,265	39,265
Additional paid-in-capital	11,532,207	11,457,320
Treasury stock at cost, 1,087,217 shares at December 31, 2017 and 1,109,852 shares at December 31, 2016	(2,966,798)	(3,028,564)
Accumulated deficit	(3,536,186)	(2,181,090)
Total shareholders' equity	5,068,488	6,286,931
Total liabilities and shareholders' equity	\$ 13,924,600	\$ 13,647,421

See accompanying notes to consolidated financial statements.

[Table of Contents](#)**Micron Solutions, Inc. and Subsidiary
Consolidated Statements of Operations**

	Year Ended December 31,	
	2017	2016
Net sales	\$ 20,102,662	\$ 19,638,217
Cost of sales	17,810,284	16,739,526
Gross profit	2,292,378	2,898,691
Selling and marketing	841,845	1,153,044
General and administrative	2,357,909	2,151,244
Research and development	111,014	97,234
Total operating expenses	3,310,768	3,401,522
Net loss from operations	(1,018,390)	(502,831)
Other income (expense):		
Interest expense	(395,085)	(259,762)
Other income, net	57,419	50,131
Total other expense, net	(337,666)	(209,631)
Net loss before income tax benefit	(1,356,056)	(712,462)
Income tax benefit	(960)	—
Net loss	\$ (1,355,096)	\$ (712,462)
Earnings (loss) per share - basic and diluted	\$ (0.48)	\$ (0.25)
Weighted average common shares outstanding - basic and diluted	2,824,061	2,816,516

See accompanying notes to consolidated financial statements.

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**Micron Solutions, Inc. and Subsidiary
Consolidated Statements of Changes in Shareholders' Equity**

	Common stock		Additional paid-in capital	Treasury stock		Accumulated deficit	Total
	Shares	Amount		Shares	Amount		
December 31, 2015	3,926,491	\$ 39,265	\$ 11,381,536	1,124,852	\$ (3,069,496)	\$ (1,468,628)	6,882,677
Share-based compensation							
- options			47,256				47,256
Change in the incremental value of warrants			18,310				18,310
Issuance of common stock from treasury			10,218	(15,000)	40,932		51,150
Net loss						(712,462)	(712,462)
December 31, 2016	3,926,491	\$ 39,265	\$ 11,457,320	1,109,852	\$ (3,028,564)	\$ (2,181,090)	6,286,931
Share-based compensation							
- options			48,129				48,129
Issuance of common stock from treasury for directors fees			26,758	(22,635)	61,766		88,524
Net loss						(1,355,096)	(1,355,096)
December 31, 2017	3,926,491	\$ 39,265	\$ 11,532,207	1,087,217	\$ (2,966,798)	\$ (3,536,186)	5,068,488

See accompanying notes to consolidated financial statements.

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Consolidated Statements of Cash Flows**

	Year Ended December 31,	
	2017	2016
Cash flows from operating activities:		
Net loss	\$ (1,355,096)	\$ (712,462)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Gain on sale of property, plant and equipment	(21,750)	—
Change in fair value of assets held for sale	—	(23,750)
Depreciation and amortization	1,611,139	1,541,006
Impairment of intangibles	1,771	—
Non-cash interest expense	63,846	27,186
Change in allowance for doubtful accounts	10,000	(30,000)
Share-based compensation expense	136,653	47,256
Changes in operating assets and liabilities:		
Accounts receivable	(328,640)	551,745
Inventories	(353,114)	(941,373)
Prepaid expenses and other current assets	153,408	(25,228)
Other non-current assets	145,942	112,604
Accounts payable	(209,912)	190,873
Accrued expenses and other current liabilities	(13,296)	57,584
Customer deposits	218,334	28,883
Deferred revenue, current	(139,155)	(47,849)
Other non-current liabilities	(156,953)	(115,228)
Net cash provided by (used in) operating activities	(236,823)	661,247
Cash flows from investing activities:		
Purchases of property, plant and equipment	(924,621)	(1,354,091)
Proceeds from sale of property, plant and equipment	34,600	—
Cash paid for patents and trademarks	(29,307)	(13,205)
Net cash provided by (used in) investing activities	(919,328)	(1,367,296)
Cash flows from financing activities:		
Proceeds from (payments on) refinanced revolving line of credit, net	(1,785,795)	274,300
Proceeds from new revolving line of credit	1,879,047	—
Proceeds from equipment line of credit	—	647,351
Proceeds from term notes payable	—	500,000
Proceeds from machinery and equipment term loan	2,500,000	—
Proceeds from real estate term loan	2,000,000	—
Payments on term notes payable	(2,606,688)	(587,799)
Payments of debt issuance costs	(153,806)	(20,863)
Payment on subordinated debt	(100,000)	(50,000)
Proceeds from stock option exercises	—	51,150
Net cash provided by (used in) financing activities	1,732,758	814,139
Net increase in cash and cash equivalents	576,607	108,090
Cash and cash equivalents, beginning of period	380,381	272,291
Cash and cash equivalents and restricted cash, end of period	\$ 956,988	\$ 380,381

See accompanying notes to consolidated financial statements.

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Micron Solutions, Inc. and Subsidiaries
Consolidated Statements of Cash Flows Supplemental Information

<i>Supplemental Cash Flow Information</i>	Year Ended December 31,	
	2017	2016
Cash paid for interest	\$ 324,641	\$ 233,330
Non-cash activities:		
Issuance of treasury stock for directors fees	\$ 88,524	\$ —
Change in incremental value of warrants	\$ —	\$ 18,310
Non-cash payoff of revolver as part of refinancing	\$ —	\$ 500,000
Non-cash payoff of notes as part of refinancing	\$ —	\$ 457,828
Equipment line of credit converted to term notes payable	\$ —	\$ 1,524,115

See accompanying notes to consolidated financial statements.

Micron Solutions, Inc. and Subsidiary
Notes to Consolidated Financial Statements
December 31, 2017 and 2016

1. Description of Business

Micron Solutions[®], Inc., a Delaware corporation ("Micron Solutions"), through its wholly-owned Massachusetts operating subsidiary, Micron Products[®], Inc. ("Micron" and together with Micron Solutions, the "Company"), is a diversified contract manufacturing organization ("CMO") that produces highly-engineered, innovative components requiring precision machining and thermoplastic injection molding. The Company also manufactures components, devices and equipment for military, law enforcement, automotive and consumer products applications. The Company's capabilities include the production and sale of silver/silver chloride coated and conductive resin sensors used as consumable component parts in the manufacture of integrated disposable electrophysiological sensors. The Company's machining operations produce quick-turn, high volume and patient-specific orthopedic implant components and instruments. The Company also has custom thermoplastic injection molding capabilities as well as a full array of design, engineering, production services and management. The Company competes globally, with approximately 42% of its revenue derived from exports.

The Company's common stock has been listed on the NYSE American exchange since 1992 and traded under the ticker symbol HRT until March of 2017 when the Company changed its ticker symbol to MICR in conjunction with its name change from Arrhythmia Research Technology, Inc. to Micron Solutions, Inc.

Today, the Company has diversified manufacturing capabilities with the capacity to participate in full product life-cycle activities from early stage development and engineering and prototyping to full scale manufacturing as well as packaging and product fulfillment services.

Operating matters and liquidity

On December 29, 2017 the Company entered into a new three-year \$9,500,000 asset based credit and security agreement, with a Massachusetts trust company, replacing the credit facility and forbearance agreement with the Company's previous lender. The asset based credit and security agreement includes a revolving line of credit of up to \$5.0 million ("Revolver"), a machinery and equipment term loan of \$2.5 million ("Equipment Loan") and a real estate term loan of \$2.0 million ("Real Estate Loan" and together with the "Equipment Loan" the "Term Loans"). At December 31, 2017, the outstanding balance on the revolver was \$1,879,047.

In addition to providing funds to discharge all the indebtedness with the Company's previous lender, the asset based credit and security agreement provided \$450,000 designated to discharge the outstanding subordinated promissory notes. On December 29, 2017, one subordinated note in the principal balance of \$100,000 was discharged in full. The remaining five subordinated notes totaling an aggregate principal balance of \$350,000 were discharged on January 2, 2018 (see Note 12).

The Company believes that cash flows from its operations, together with its existing working capital, booked orders, the asset based credit and security agreement and other resources, will be sufficient to fund operations at current levels and repay debt obligations over the next twelve months and beyond; however, there can be no assurance that the Company will be able to do so.

Assessment of going concern

At December 31, 2017, the Company identified certain conditions and events which in the aggregate required management to perform an assessment of the Company's ability to continue as a going concern. These conditions included the Company's negative financial history and the Company's ability to generate sufficient cash to support the Company's operations and to meet debt service requirements under the Company's new lending agreement entered into on December 29, 2017.

Management's analysis includes forecasting future revenues and cash flows, taking into consideration past performance and the requirements under the credit and security agreement. Revenue and cash flow forecasts are dependent on the Company's ability to fill booked orders from existing customers, including the three-year exclusive supply agreement with its largest customer effective January 1, 2018 and its ability close new and expanded business. Based on management's analysis, the Company expects to generate sufficient cash flows to fulfill its payment obligations over the next twelve months from the date these financial statements were issued.

2. Accounting Policies

Principles of consolidation

The consolidated financial statements (the "financial statements") include the accounts of Micron Solutions, Inc. and its operating subsidiary, Micron Products, Inc. All intercompany balances and transactions have been eliminated in consolidation.

Micron Solutions, Inc. and Subsidiary
Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates.

Revenue recognition

Revenue is recorded when all criteria for revenue recognition have been satisfied. Revenue is recognized in the period when persuasive evidence of an arrangement with a customer exists, the products are shipped and title has transferred or when exclusive control has been transferred to the customer, the price is fixed or determinable and collection is probable. The Company has entered into supply agreements with certain foreign customers where revenue is not recognized when the product is shipped but instead is recognized when the customer consumes the product and title is transferred.

The Company enters into arrangements containing multiple elements which may include a combination of the sale of molds, tooling, engineering and validation services ("tooling") and production units. The Company has determined that certain engineering and tooling arrangements, and the related production units, represent one unit of accounting, based on an assessment of the respective standalone value. When the Company determines that an arrangement represents one unit of accounting, the revenue is deferred over the estimated product life-cycle, based upon historical knowledge of the customer, which is generally one to three years. The Company carries the sales and tooling costs, associated with the related arrangement, as deferred revenue and other current and non-current assets, respectively, on the Company's balance sheet. As the deferred revenue is amortized to sales over the product lifecycle, the associated prepaid tooling costs are amortized to cost of sales.

The Company cannot effectively predict short-term or long-term production volume in a consistent and meaningful manner, due to the nature of these molds and associated products. Therefore, the Company is unable to account for the transactions under the Units of Production method and management has determined the most appropriate amortization method to be the Straight-Line method.

The Company may from time to time, at the customer's request, enter into a bill and hold arrangement. The Company evaluates the nature of the arrangement including, but not limited to (i) the customer's business purpose, (ii) the transfer of risk of ownership to the customer and (iii) the segregation of inventory, along with other elements in accordance with relevant accounting guidance to determine the appropriate method of revenue recognition for each arrangement.

Revenue for software license sales is recognized when licenses are sold as the revenue cycle is completed with no warranty, returns or technical support to customers. Total revenue from software sales was immaterial in relation to consolidated revenues.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers". The core principle behind ASU 2014-09 is that an entity should recognize revenue in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering goods and services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract and recognizing revenue when the entity satisfies the performance obligations. This ASU allows two methods of adoption; a full retrospective approach where historical financial information is presented in accordance with the new standard, and a modified retrospective approach where this ASU is applied to the most current period presented in the financial statements. In August 2015, the FASB issued ASU No. 2015-14 "Revenue from Contracts with Customers: Deferral of the Effective Date," which deferred the effective date of ASU 2014-09 to annual reporting periods beginning after December 15, 2017, with earlier application permitted as of annual reporting periods beginning after December 15, 2016.

The Company has adopted ASU 2014-09 effective January 1, 2018 using the modified retrospective approach. While the Company has made substantial progress in its implementation analysis, it is continuing to evaluate certain aspects of the standard. The Company's analysis includes reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements under the new standard. The Company has reviewed a sample of supply and manufacturing contracts with customers that are believed to represent the Company's revenue streams and continue to review additional contracts to finalize a new accounting policy. The determination of the impact of adoption of this ASU on the financial condition, results of operations, cash flows and disclosures is ongoing, and, as such, the Company is not able to reasonably estimate the quantitative effect that the adoption of the new standard will have on its financial statements.

Based on our ongoing assessment, ASU 2014-09 will affect the timing of certain revenue related transactions primarily resulting from the earlier recognition of the Company's tooling sales and costs. Upon adoption of ASU 2014-09 tooling sales and costs will be recorded over time as the Company satisfies its performance obligations. Similarly, the Company manufactures parts that have no

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Micron Solutions, Inc. and Subsidiary Notes to Consolidated Financial Statements December 31, 2017 and 2016

alternative use to the Company (since the parts are custom made to specific customer orders), and the Company believes for certain customers there is a legally enforceable right to payment for performance completed to date on these manufactured parts. For those manufactured parts that meet these two criteria, the Company will recognize revenue over time. The Company has determined that sales of certain proprietary products will continue to be recorded at the point in time of shipment as the Company does meet any of the over-time revenue recognition criteria for the related contracts.

Fair value of financial instruments

The carrying amount reported in the balance sheets for cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the immediate or short-term nature of such instruments. The carrying value of debt approximates fair value since it provides for market terms and interest rates.

Concentration of credit risk

Financial instruments which potentially expose the Company to concentrations of credit risk consist primarily of accounts receivable and cash and cash equivalents. It is the Company's policy to place its cash in high quality financial institutions. The Company does not believe significant credit risk exists above federally insured limits with respect to these institutions.

Accounts receivable are customer obligations due under normal trade terms. A large portion of the Company's products are sold to large diversified medical, military and law enforcement product manufacturers. The Company does not generally require collateral for its sales; however, the Company believes that its terms of sale provide adequate protection against credit risk. While the Company has a strong record of collecting on its receivables, the Company maintains accounts receivables insurance in order to mitigate concentration of credit risk where its top five customers in revenue constituted 49% of the accounts receivable at December 31, 2017 as compared to 51% at December 31, 2016.

During the year ended December 31, 2017, the Company had net sales to two customers constituting 17% and 10%, respectively, of total 2017 net sales. Accounts receivable from these two customers at December 31, 2017 was 13% and 3%, respectively, of the total accounts receivable balance at year end. During the year ended December 31, 2016, the Company had net sales to two customers constituting 19% and 12%, respectively, of total 2016 net sales. Accounts receivable from these two customers at December 31, 2016 was 26% and 7%, respectively, of the total accounts receivable balance at year end.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and on deposit in high quality financial institutions with maturities of three months or less at the time of purchase.

Restricted cash

Restricted cash represents cash obtained pursuant to the Company's asset based credit and security agreement for the designated purpose of discharging the subordinated promissory notes, which occurred on January 2, 2018 (see Note 5).

Accounts receivable and allowance for doubtful accounts

Accounts receivable represent amounts invoiced by the Company. Management maintains an allowance for doubtful accounts based on information obtained regarding individual accounts and historical experience. Amounts deemed uncollectible are written off against the allowance for doubtful accounts. Bad debts have not had a significant impact on the Company's financial position, results of operations and cash flows.

The Company insures receivables for certain customers based upon several factors. Such factors include the customer's payment terms, ordering patterns and volume requirements, the customer's payment history, or general economic conditions of the region in which a customer is located.

Inventories

The Company values its inventory at the lower of average cost, or net realizable value, and cost is determined using first in first out (FIFO) or average cost. The Company reviews its inventory for quantities in excess of production requirements, obsolescence and for compliance with internal quality specifications. A review of inventory on hand is made at least annually and obsolete inventory may be disposed of and/or recycled. Any adjustments to inventory would be equal to the difference between the cost of inventory and the estimated net market value based upon assumptions about future demand, market conditions and expected cost to distribute those

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Micron Solutions, Inc. and Subsidiary Notes to Consolidated Financial Statements December 31, 2017 and 2016

products to market. The Company also has supply agreements with certain foreign customers to hold inventory at the customer's warehouses.

Property, plant and equipment

Property, plant and equipment are recorded at cost and include expenditures which substantially extend their useful lives. Depreciation on property, plant and equipment is calculated using the straight-line method over the estimated useful lives of the assets. Expenditures for maintenance and repairs are charged to earnings as incurred. When equipment is retired or sold, the resulting gain or loss is reflected in earnings.

Assets held for sale

Property classified as held for sale is measured at the lower of its carrying value or fair value less cost to sell. Gains or losses are recognized for any subsequent changes to fair value less cost to sell; however, gains that may be recognized are limited by cumulative losses previously recognized. Property held for sale is not depreciated.

Property is classified as held for sale in the period in which management with the appropriate authority commits to a plan to sell the asset; the asset is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets; an active program to locate a buyer and other actions required to complete the plan of sale have been initiated; the sale of the property or asset within one year is probable and will qualify for accounting purposes as a sale; the asset is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and actions required to complete the plan of sale indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Long-lived assets classified as held for sale are presented separately in the statement of financial position of the current period (see Note 4).

Fair value hierarchy

The Company groups its assets and liabilities generally measured at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value.

Level 1 – Valuation is based on quoted prices in active markets for identical assets or liabilities. Valuations are obtained from readily available pricing sources.

Level 2 – Valuation is based on observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Valuation is based on unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using unobservable inputs to pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the investment. The Company recognizes transfers between levels at the end of the reporting period. There were no changes in levels in 2017.

At December 31, 2017 and 2016, assets held for sale is the only item in the financial statements reflected at fair value. Assets held for sale are considered level 3. The fair value of assets held for sale was determined using the sales price per the amended purchase and sale agreement, less the estimated cost to sell (see Note 4).

Long-lived and intangible assets

The Company assesses the impairment of long-lived assets and intangible assets with finite lives annually or whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable. Based upon the annual review, the Company recorded impairment charges of \$1,771 in 2017. In 2017, the Company determined that the trade name, Arrhythmia Research Technology, Inc., no longer provided any future economic benefit and recorded an impairment charge of \$1,771 for the remaining unamortized balance of the trade name. No impairment charges were recorded in 2016.

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Intangible assets consist of the following:

	Estimated Useful Life (in years)	December 31, 2017			December 31, 2016		
		Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Patents and trademarks	10	\$ 22,911	\$ 9,888	\$ 13,023	\$ 22,911	\$ 8,358	\$ 14,553
Patents and trademarks pending	—	13,786	—	13,786	13,541	—	13,541
Trade names	15	29,062	738	28,324	3,379	1,380	1,999
Total intangible assets		\$ 65,759	\$ 10,626	\$ 55,133	\$ 39,831	\$ 9,738	\$ 30,093

Amortization expense related to intangible assets, excluding the 2017 impairment charge noted above, was \$2,496 and \$1,757 in 2017 and 2016, respectively. Estimated future annual amortization expense for currently amortizing intangible assets is expected to approximate \$10,716.

Income taxes

The Company recognizes deferred tax liabilities and assets for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax liabilities and assets are determined based on the difference between the financial statement and tax bases of assets and liabilities using tax rates in effect for the year in which the differences are expected to reverse.

The Company follows the provisions of FASB ASC 740, “Accounting for Uncertainty in Income Taxes - An Interpretation of FASB No. 109.” FASB ASC 740 provides detailed guidance for the financial statement recognition, measurement and disclosure of uncertain tax positions recognized in the financial statements in accordance with SFAS No. 109. Tax positions must meet a “more-likely-than-not” recognition threshold at the effective date to be recognized upon the adoption of FASB ASC 740 and in subsequent periods. No interest and penalties related to uncertain tax positions were accrued at December 31, 2017. The Company’s primary operations are located in the U.S. Tax years ended December 31, 2014 or later remain subject to examination by the IRS and state taxing authorities.

Share-based compensation

Share-based compensation cost is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the employee’s requisite service period (generally the vesting period of the share-based grant).

Earnings per share data

Basic earnings (loss) per share is computed by dividing net income (loss) available to common shareholders by the weighted average number of common shares outstanding. The computation of diluted earnings (loss) per share is similar to the computation of basic earnings (loss) per share except that the denominator is increased to include the average number of additional common shares that would have been outstanding if the dilutive potential common shares had been issued. In addition, the numerator is adjusted for any changes in net income (loss) that would result from the assumed conversions of those potential shares.

Research and development

Research and development expenses include costs directly attributable to conducting research and development programs primarily related to the development of a unique process to improve silver coating during the manufacturing processes, including the design and testing of specific process improvements for certain medical device components. Such costs include salaries, payroll taxes, employee benefit costs, materials, supplies, depreciation on research equipment, and services provided by outside contractors. All costs associated with research and development programs are expensed as incurred.

Recently Issued Accounting Pronouncements

In the normal course of business, management evaluates all new accounting pronouncements issued by the Financial Accounting Standard Board (“FASB”), Securities and Exchange Commission (“SEC”), Emerging Issues Task Force (“EITF”), or other authoritative accounting bodies to determine the potential impact they may have on the Company’s Consolidated Financial Statements. Based upon this review, except as noted below, management does not expect any of the recently issued accounting pronouncements, which have not already been adopted, to have a material impact on the Company’s consolidated financial statements.

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In August 2016, the FASB issued Accounting Standards Update (“ASU”) No. 2016-15, “Statement of Cash Flows (Topic 230) Classification of Certain Cash Receipts and Cash Payments”. This standard provides guidance for eight cash flow classification issues in current GAAP. The standard is effective for interim and annual reporting periods beginning after December 15, 2017. The Company is currently evaluating the impact that the standard will have on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, “Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting” (“ASU 2016-09”). The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. The standard is intended to reduce the cost and complexity with maintaining or improving the usefulness of information provided to users of financial statements. The standard is effective for interim and annual reporting periods beginning after December 15, 2016. As a result of the Company’s adoption of ASU 2016-09 in 2017, the Company recognizes the excess tax benefits as a reduction of income tax expense regardless of whether the benefit reduces income taxes payable. The Company has elected to continue to estimate and apply a forfeiture rate based on awards expected to vest. The adoption of this standard had no impact on the Company’s consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, “Leases (Topic 842)”, (“ASU 2016-02”) which requires companies to recognize all leases as assets and liabilities on the consolidated balance sheet. The standard retains a distinction between finance leases and operating leases, and the classification criteria for distinguishing between finance leases and operating leases are substantially similar to the classification criteria for distinguishing between capital leases and operating leases in the current accounting literature. The result of retaining a distinction between finance leases and operating leases is that under the lessee accounting model in ASU 2016-02, the effect of leases in a consolidated statement of comprehensive income and a consolidated statement of cash flows is largely unchanged from previous GAAP. The amendments in this standard are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Earlier application is permitted. The Company is currently evaluating the impact that the adoption of this standard will have on its consolidated financial statements.

In November 2015, the FASB issued ASU No. 2015-17, "Balance Sheet Classification of Deferred Taxes" (“ASU 2015-17”) which requires the presentation of deferred tax assets and deferred tax liabilities, and any related valuation allowances, as noncurrent on the consolidated balance sheets. The standard is effective for interim and annual reporting periods beginning after December 15, 2016 and early adoption is permitted. The adoption of ASU 2015-17 had no cumulative effect on shareholders’ equity, results of operations or cash flows.

In July 2015, the FASB issued ASU No. 2015-11, “Simplifying the Measurement of Inventory,” (“ASU 2015-11”) which simplifies the subsequent measurement of inventory by requiring inventory to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. This standard is effective for public business entities for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. The Company adopted this standard in the first quarter of 2017 which had no impact on the consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, “Revenue from Contracts with Customers” (“ASU 2014-09”). The core principle behind ASU 2014-09 is that an entity should recognize revenue in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering goods and services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract and recognizing revenue when the entity satisfies the performance obligations. This ASU allows two methods of adoption; a full retrospective approach where historical financial information is presented in accordance with the new standard, and a modified retrospective approach where this ASU is applied to the most current period presented in the financial statements. In August 2015, the FASB issued ASU No 2015-14 “Revenue from Contracts with Customers: Deferral of the Effective Date,” which deferred the effective date of ASU 2014-09 to annual reporting periods beginning after December 15, 2017, with earlier application permitted as of annual reporting periods beginning after December 15, 2016.

Reclassification of prior period balances

Amounts in prior year financial statements are reclassified when necessary to conform to the current year presentation.

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3. Inventories

Inventories consist of the following:

	December 31, 2017	December 31, 2016
Raw materials	\$ 1,100,187	\$ 1,027,474
Work-in-process	822,244	537,858
Finished goods	1,490,768	1,494,753
Total	\$ 3,413,199	\$ 3,060,085

The total cost of silver in our inventory as raw materials, as work-in-process or as a plated surface on finished goods had an estimated cost of \$536,963 and \$521,746 at December 31, 2017 and 2016, respectively. The increase in inventory was due largely to an increase in work-in-process inventory related to tooling orders.

4. Property, Plant and Equipment, Net

Property, plant and equipment, net consist of the following:

	Asset Lives (in years)	December 31, 2017	December 31, 2016
Machinery and equipment	3 to 15	\$ 17,498,586	\$ 16,647,302
Building and improvements	5 to 25	3,986,715	3,986,715
Vehicles	3 to 5	90,713	90,713
Furniture, fixtures, computers and software	3 to 5	1,542,027	1,504,776
Construction in progress		17,412	402,099
Total property, plant and equipment		23,135,453	22,631,605
Less: accumulated depreciation		(17,391,414)	(16,190,694)
Property, plant and equipment, net		\$ 5,744,039	\$ 6,440,911

For the year ended December 31, 2017, the Company recorded \$1,608,643 of depreciation expense compared to \$1,539,249 for the year ended December 31, 2016. There are no commitments related to the completion of construction in process as of December 31, 2017.

In December 2015, the Company entered into a Letter of Intent with a Buyer (collectively the “Parties”) to sell two unoccupied buildings, with a total of approximately 52,000 square feet, and land, at its Fitchburg, Massachusetts campus. Subsequently, in January 2016, the Parties entered into a Purchase and Sale Agreement (“Agreement”) for this real estate to close within twelve months from the date of the Agreement. As these buildings were under agreement to be sold at December 31, 2015 they were classified as Assets Held for Sale valued at \$665,000 as of December 31, 2015. The carrying value approximated the fair value less the cost to sell.

In December 2016, the Parties entered into a First Amendment to the Purchase and Sale Agreement (the “First Amendment”). The First Amendment extended the time to close to January 13, 2018. As consideration for extending the Agreement, the Buyer agreed to (i) release the \$25,000 being held as a deposit to the Company; (ii) increase the purchase price by \$25,000; (iii) pay the Company \$4,000 per month as an extension fee beginning in January 2017 through January 2018, or the culmination of the Agreement, and (iv) pay the Company \$7,500 per month for a 150 day additional extension, to June 2018, only for the purpose of the Buyer securing historical tax credits until the termination or culmination of the Agreement. The \$25,000 deposit released to the Company, and the extension fees, were recorded as other income for the year ended December 31, 2016.

As a result of the increase in sale price and other considerations, the Company determined the carrying value at December 31, 2016 to be \$688,750. The increase in the carrying value was recorded as Other Income for the year ended December 31, 2016 and did not exceed the amount of previously recorded losses in accordance with the appropriate accounting guidance. At December 31, 2017, the carrying value of the assets held for sale remains at \$688,750, the approximated fair value less the cost to sell.

In January 2017, the Parties entered into a Second Amendment to the Purchase and Sale Agreement (the “Second Amendment”). The Second Amendment (i) permits the Buyer to assign the Agreement to a third party; (ii) extends the term of the

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\$4,000 per month extension fee from January 2018 to March 2018 and (iii) and amends the term of the additional extension fee of \$7,500 per month for the period April 2018 through July 2018.

In July 2017, the Parties entered into a Third Amendment to the Agreement (the “Third Amendment”) to further extend the time to close to June 2019. The Third Amendment permitted the Buyer to contract with outside parties to conduct certain due diligence activities on the property up until August 13, 2017. Additionally, the Third Amendment further extended the extension fees through June 2019, or the culmination of the Agreement, and allows for the Buyer to defer the last six months of extension fees to be settled at closing.

In September 2017, the Parties entered into a Fourth Amendment to the Agreement (the “Fourth Amendment”) to extend the time allowed to the Buyer to complete due diligence activities on the property from August 13, 2017 until October 13, 2017.

In January 2018, the Company was notified that the National Park Service of the Department of the Interior designated the area in which the buildings are located as a Historic District, which will enable the Buyer to proceed with securing historical tax credits as agreed between the Parties in the Second Amendment.

The closing is subject to permitting and approvals from the City of Fitchburg and the Commonwealth of Massachusetts and is expected to take place by the end of 2018.

5. Debt

The following table sets forth the items which comprise debt for the Company:

	December 31, 2017	December 31, 2016
Revolving line of credit	\$ 1,879,047	\$ 1,785,795
Equipment line of credit	\$ —	\$ 102,500
Subordinated promissory notes	\$ 350,000	\$ 432,011
Term notes payable:		
Commercial term loan	\$ —	\$ 2,444,728
Machinery & equipment term loan	2,500,000	—
Real estate term loan	2,000,000	—
Equipment notes	—	59,461
Debt issuance costs	(153,806)	(45,858)
Total term notes payable, net	\$ 4,346,194	\$ 2,458,331
Less current portion, net of debt issuance costs of \$51,269 and \$20,413 for the years ended December 31, 2017 and 2016, respectively	367,779	487,468
Term notes payable, non-current	3,978,415	1,970,863
Total short and long term debt, net	\$ 6,575,241	\$ 4,778,637

Bank Debt - 2017

On December 29, 2017, the Company entered into a new three-year \$9,500,000 asset based credit and security agreement, with a Massachusetts trust company, replacing the credit facility and forbearance agreement with the Company’s previous lender. The asset based credit and security agreement also provided funds with which to discharge the subordinated promissory notes.

The asset based credit and security agreement includes a revolving line of credit of up to \$5.0 million (“Revolver”), a machinery and equipment term loan of \$2.5 million (“Equipment Loan”) and a real estate term loan of \$2.0 million (“Real Estate Loan” and together with the “Equipment Loan” the “Term Loans”).

Revolver

The \$5.0 million Revolver provides for borrowings up to:

- (i) Up to 85% of the face amount of eligible accounts (other than credit insured accounts), plus
- (ii) Up to 90% of the face amount of credit insured accounts, plus

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- (iii) The lesser of (a) up to 60% of the cost of eligible inventory, (b) up to 80% of the net orderly liquidation value of the cost of such eligible inventory, and (iii) \$1,500,000 minus the amount of eligible consigned inventory included in the Borrowing Base, plus
- (iv) The lesser of (a) up to 60% of the cost of eligible consigned inventory (as determined from an initial and subsequent periodic appraisals), and (b) \$400,000, minus
- (v) Certain reserves established in Lender's discretion.

The Revolver allows for interest only payments during the term of the facility with the full principal outstanding balance to be paid upon maturity on December 29, 2020. Interest on all borrowings from the Revolver shall be equal to the Wall Street Journal prime rate ("Prime Rate") plus 0.5% (4.875% at December 31, 2017). In lieu of having interest charged at the Prime Rate, the Company shall have the option, on the last day of each month, (the "LIBOR Option") to have interest charged at a rate of interest equal to the daily one-month LIBOR plus 3.25% for the following month. The interest rate will automatically convert back to the Prime Rate at the beginning of the next month unless the Company elects the LIBOR Option for the next month. This Revolver carries a provision for a quarterly unused facility fee equal to 0.25% per annum of the average daily undisbursed face amount of the Revolver during the three months immediately preceding the applicable due date and has no prepayment penalty. Amounts available to borrow under the revolver are \$1,001,430 at December 31, 2017.

Term Loans

The Equipment Loan requires monthly principal payments of approximately \$29,762, payable on the first day of each month commencing February 1, 2018. The Equipment Loan is based upon an 84 month amortization with a balloon payment of approximately \$1,458,333 due and payable in full upon maturity on December 29, 2020.

The Real Estate Loan requires monthly principal payments of approximately \$8,333, payable on the first day of each month commencing February 1, 2018. The Real Estate Loan is based upon a 240 month amortization with a balloon payment of approximately \$1,708,333 due and payable in full upon maturity on December 29, 2020.

Interest on the Term Loans shall be at such Wall Street Journal prime rate plus 0.75% (5.125% at December 31, 2017). In lieu of having interest charged at the Prime Rate, the Company shall have a LIBOR Option, as described above, to have interest charged at a rate of interest equal to the daily one-month LIBOR plus 3.5% for the following month.

All interest will be calculated based upon a year of 360 days for actual days elapsed. All interest will accrue from the Closing Date and will be payable monthly in arrears. Upon the occurrence and during the continuation of an Event of Default, all interest will be increased by 2% above the per annum rate otherwise applicable thereto. The Term Loans carry a prepayment penalty with respect to the prepayment of any portion of either Term Loan equal to 3%, 2%, and 1% of the amount prepaid in the first, second, and third years, respectively, of the asset based credit and security agreement.

This three-year asset based credit and security agreement contains covenants related to various matters including certain financial covenants, prohibitions on further borrowings and security interests, merger or consolidation, acquisitions, guarantees, sales of assets other than in the normal course of business, leasing, and payment of dividends. The lender has a security interest in all assets and a mortgage encumbering certain real property.

Bank Debt – 2016

At December 31, 2016 the Company had a multi-year credit facility with a Massachusetts based bank consisting of a revolving line of credit (the "revolver"), a commercial term loan and an equipment line of credit. The debt was secured by substantially all assets of the Company with the exception of real property.

Due to a non-compliance with the debt service coverage ratio covenant at June 30, 2017, the Company and the bank entered into a forbearance agreement on September 29, 2017. Under the agreement the bank agreed to forbear from collections on all outstanding debt prior to March 31, 2018, provided no further events of default occur, and agreed to extend the revolver to March 31, 2018 subject to certain modifications of the agreement.

Pursuant to the agreement, the interest rate under the revolver increased from the Prime Rate plus 0.25%, to the Prime Rate plus 1.00%, an increase of 75 basis points. The Company also agreed to provide monthly financial reporting and daily cash sweeps and to a modification of the equipment line to immediately terminate the availability of further advances under the equipment line rather than expiration thereof in November 2017 at which time the equipment line converted into a five-year term note. In addition, the bank agreed to modify the debt service coverage ratio calculation for the September 30, 2017 measurement date. The Company is in compliance with this revised third quarter covenant calculation.

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The credit facility and forbearance agreement were replaced on December 29, 2017 by the asset based credit and security agreement as further described above.

Revolver

The revolver provided for borrowings up to 80% of eligible accounts receivable and 50% of eligible raw materials inventory. The interest rate on the revolver was calculated at the bank's prime rate plus 0.25% (4.0% at December 31, 2016). In November 2016 the Company refinanced and consolidated \$500,000 from the revolver into a new term loan as further described below. The revolver was paid in full on December 29, 2017 as part of the asset based credit and security agreement described above.

Commercial term loan

In November 2016, the Company refinanced its bank term debt, including the commercial term loan and three equipment term loans, along with \$500,000 from the revolver, into a new \$2,481,943 consolidated five year commercial term loan with a maturity date in November 2021. The interest rate on the loan was a fixed 4.65% per annum and the loan required monthly payments of principal and interest of approximately \$46,500. The commercial term loan was paid in full on December 29, 2017 as part of the asset based credit and security agreement described above.

Equipment line of credit and equipment term loans

In March 2013, the Company entered into an equipment line of credit that allowed for advances of up to \$1.0 million and included a one-year draw period during which payments were interest only. The draw period ended in March 2014 and the then outstanding balance on the equipment line of credit of \$740,999 was converted to an equipment term loan with a five-year term, maturing in March 2019. In November 2016, the outstanding principal and accrued interest of \$380,791 on the equipment term loan was refinanced and consolidated into a new commercial term loan as described above.

In June 2014, the Company entered into an equipment line of credit that allowed for advances of up to \$1.0 million and included a one-year draw period during which payments were interest only. The draw period ended in June 2015 and the then outstanding balance on the equipment line of credit of \$415,785 was converted to an equipment term loan with a five-year term, maturing in June 2020. In November 2016, the outstanding principal and accrued interest of \$315,272 on the equipment term loan was refinanced and consolidated into a new commercial term loan with the bank as described above.

In June 2015, the Company entered into an equipment line of credit that allowed for advances of up to \$1.0 million and included a one-year draw period during which payments were interest only. At December 31, 2015, the Company had drawn \$336,850 on the equipment line of credit. The draw period ended in June 2016 and the then outstanding balance on the equipment line of credit of \$881,701 was converted to an equipment term loan with a five-year term, maturing in June 2021. In November 2016, the outstanding principal and accrued interest of \$832,420 on the equipment term loan was refinanced and consolidated into a new bank term loan with the bank as described above.

In November 2016, the Company entered into a new equipment line of credit that allowed for advances of up to \$1.0 million under the Company's multi-year credit facility. At December 31, 2016, \$102,500 has been drawn on the new equipment line of credit. Pursuant to the Company's September 29, 2017 forbearance agreement with the bank, the bank terminated the availability of further advances under the equipment line rather than the expiration thereof in November 2017 at which time the balance on the equipment line of \$504,781 converted into a five-year term note. The equipment term loan was discharged in full on December 29, 2017 as part of the asset based credit and security agreement described above.

Other debt

Equipment notes

In January 2013, the Company entered into two equipment notes totaling \$272,500 with a financing company to acquire production equipment. The notes bear interest at 4.66% and require monthly payments of principal and interest totaling approximately \$5,000 over the term of five years. The equipment notes were paid in full as of December 31, 2017.

Subordinated promissory notes

In December 2013, the Company completed a private offering in which the Company sold an aggregate of \$500,000 in subordinated promissory notes and issued warrants to purchase 100,000 shares of common stock. The unsecured notes required quarterly

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interest-only payments at a rate of 10% per annum for the first two years. In December 2015, the interest rate increased to 12% per annum. Three related parties participated in the private offering as follows: REF Securities, LLP, and with Mr. Rodd E. Friedman, a director of the Company since July 21, 2017, a beneficial owner of approximately 12% of the Company's common stock, invested \$100,000 in the offering; the Chambers Medical Foundation (the "Foundation"), beneficial owner of approximately 11% of the Company's common stock, invested \$100,000 in the offering; and Mr. E.P. Marinos, then a director, invested \$50,000 in the offering. The Company's Chairman of the Board is a co-trustee of the Foundation but has held no dispositive powers since his appointment as such.

In October 2016, the Company and six of the seven investors in the private offering, aggregating \$450,000 of the notes, including the three related parties holding \$250,000 of the notes, agreed to extend the maturity dates of the notes to December 31, 2018 at a rate of 10% per annum. One investor did not extend the maturity date and that \$50,000 note was paid at maturity in December 2016. In the fourth quarter of 2016, the Company calculated the incremental fair value of extending the expiration date of the Notes and Warrants and determined that the amendment represented a debt modification in accordance with the guidance outlined in ASC-470, "Debt". Using the Black-Scholes model, and the 10% test, the Company determined that the incremental fair value of the warrants to be \$18,310 which was recorded as a reduction against the Notes and an increase in Additional Paid-in Capital in 2016.

The discount on the notes is being recognized as non-cash interest expense over the term of the notes. The Company recorded \$17,989 and \$27,186 for the years ended December 31, 2017 and 2016, respectively. The unamortized discount, which is net against the outstanding balance of the subordinated promissory notes, was \$0 at December 31, 2017 and \$17,989 at December 31, 2016. The unamortized discount was fully amortized onto the balance sheet on December 29, 2017 as a result of the asset based credit and security agreement providing for the discharge of the subordinated promissory notes before or immediately after December 31, 2017.

On December 29, 2017, as part of entering into the three-year asset based credit and security agreement, the Company obtained funds to discharge the remaining \$450,000 of subordinated debt. On December 29, 2017, the Company paid one of the subordinated notes in the principal amount of \$100,000. The remaining five notes, totaling an aggregate principal amount \$350,000, were discharged on January 2, 2018, including the subordinated notes held by the three related parties mentioned above. The Company carried \$350,000 as restricted cash at December 31, 2017 for this purpose.

In connection with the private offering of subordinated promissory notes, the Company issued 100,000 warrants to purchase the Company's common stock, including 20,000 warrants to REF Securities, LLP, 20,000 warrants to the Foundation and 10,000 warrants to Mr. Marinos. The warrants were initially exercisable through December 2016 at an exercise price of \$3.51 per share. In October 2016, in connection with the extension of the maturity dates of the subordinated promissory notes, the expiration date of the remaining unexercised 70,000 warrants was extended to December 31, 2018. The discharge of the subordinated promissory notes as described above did not affect the maturity date of the warrants. The exercise price remained unchanged at \$3.51 per share. No warrants were exercised in 2017 or 2016. The 70,000 warrants remain unexercised at December 31, 2017.

Future maturities of debt for the years ending December 31 are as follows:

	2018	2019	2020	2021	2022	Thereafter	Total
Revolver	\$ 1,879,047	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 1,879,047
Subordinated promissory notes	350,000	—	—	—	—	—	350,000
Machinery and equipment note	327,381	357,143	1,815,476	—	—	—	2,500,000
Real estate note	91,667	100,000	1,808,333	—	—	—	2,000,000
Total	\$ 2,648,095	\$ 457,143	\$ 3,623,809	\$ —	\$ —	\$ —	\$ 6,729,047

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6. Income Taxes

The income tax provision consists of the following:

	Year Ended December 31,	
	2017	2016
Current:		
Federal	\$ —	\$ —
State	2,140	—
Total current income taxes	2,140	—
Deferred:		
Federal	(3,100)	—
State	—	—
Total deferred income taxes	(3,100)	—
Total income tax benefit	\$ (960)	\$ —

The components of deferred income taxes are as follows:

	Year Ended December 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	\$ 2,936,800	\$ 3,671,600
Federal and state tax credit carryforwards	517,700	493,800
Accruals and reserves	81,500	104,600
Stock based compensation	64,300	96,000
Patents and intangibles	22,000	51,100
Other long-term	21,400	500
Total long-term deferred tax assets	3,643,700	4,417,600
Deferred tax valuation allowance	(3,172,100)	(3,812,900)
Deferred tax assets, net of allowance	471,600	604,700
Property, plant and equipment	(45,300)	(544,000)
Prepaid expenses	(423,200)	(60,700)
Total deferred tax liabilities	(468,500)	(604,700)
Net deferred tax assets	\$ 3,100	\$ —

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax-planning strategies in making this assessment. As of December 31, 2017, the Company continues to maintain a valuation allowance against all of its deferred tax assets except for its AMT Credit carryforward, which is treated as a refundable attribute under the amendments to the tax laws enacted in December 2017 and is included in other assets on the Company's consolidated balance sheet.

In March 2016, the FASB issued ASU No. 2016-09, "Improvements to Employee Share-Based Payment Accounting", which simplifies several aspects of the accounting for employee share-based payment transactions including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification of related amounts within the statement of cash flows. The standard became effective beginning with the first quarter of 2017. As a result of the Company's adoption of ASU No. 2016-09 in 2017, the Company recognizes the excess tax benefits as a reduction of income tax expense regardless of whether the benefit reduces

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income taxes payable. The Company has elected to continue to estimate and apply a forfeiture rate based on awards expected to vest. The adoption of this standard had no impact on the Company's consolidated financial statements.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Reform Act"). The Tax Reform Act makes broad and complex changes to the U.S. tax code that affect fiscal 2017 including, but not limited to, a reduction of the U.S. federal corporate tax rate from 35% to 21% starting 1/1/2018, changes to bonus depreciation starting late September 2017, repeal of the domestic manufacturing deduction, and the elimination of the Alternative Minimum Tax starting in 2018. As a result of the Tax Reform Act, the Company has remeasured its deferred tax assets as of December 31, 2017 to the new 21% federal tax rate, which resulted in a reduction of \$1,002,994 to the net deferred tax asset, offset by a corresponding change to the valuation allowance.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for income tax effects of the Tax Reform Act. The final amounts may differ from these provisional amounts, possibly materially, due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the Tax Reform Act.

For the year ended December 31, 2017, the Company has federal and state net operating loss carryforwards totaling \$10,275,000 and \$12,317,000 respectively, which begin to expire in 2031. The Company also had federal and state tax credit carryovers of \$306,000 and \$268,000, respectively. The federal and state credits begin to expire in 2027 and 2017, respectively.

The Company files a consolidated federal income tax return. The actual income tax provision differs from applying the Federal statutory income tax rate (34%) to the pre-income tax loss from continuing operations as follows:

	Year Ended December 31,	
	2017	2016
Tax benefit computed at statutory rate	\$ (461,347)	\$ (250,071)
Increases (reductions) due to:		
Change in valuation allowance	(640,800)	340,600
State income taxes, net of federal benefit	1,431	(27,646)
Permanent differences	13,636	15,124
Tax credits (federal and state)	(73,618)	(32,577)
Change in tax rates	1,002,994	—
Differences on prior returns (federal and state)	156,744	(45,430)
Income tax benefit	\$ (960)	\$ —

The Company follows the provisions of ASC 740, "Accounting for Uncertainty in Income Taxes - An Interpretation of SFAS No. 109" ("ASC 740"). ASC 740 provides detailed guidance for the financial statement recognition, measurement and disclosure of uncertain tax positions recognized in the financial statements in accordance with SFAS No. 109. Tax positions must meet a "more-likely-than-not" recognition threshold at the effective date to be recognized upon the adoption of ASC 740 and in subsequent periods. No interest and penalties related to uncertain tax positions were accrued at December 31, 2017.

The Company's tax years ended December 31, 2014 or later remain subject to examination by the IRS and state taxing authorities.

7. Employee Benefit Plans

The Company sponsors an Employee Savings and Investment Plan under Section 401(k) of the Internal Revenue Code covering all eligible employees of the Company. Employees can contribute up to 90% of their eligible compensation to the maximum allowable by the IRS. The Company's matching contributions are at the discretion of the Company. The Company's matching contributions in 2017 and 2016 were \$42,215 and \$41,072, respectively.

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8. Commitments and Contingencies

Legal matters

In the ordinary course of its business, the Company is involved in various legal proceedings involving a variety of matters. The Company does not believe there are any pending legal proceedings that will have a material impact on the Company's financial position or results of operations.

Operating lease agreements

Lease expense under all operating leases was approximately \$24,954 and \$20,453 for the years ended December 31, 2017 and 2016, respectively. Future minimum lease payments for the years ending December 31 are as follows:

2018	\$ 19,191
2019	17,191
2020	17,191
2021	10,028

9. Shareholders' equity

Common stock

In 2017, the Company issued 22,635 shares of the Company's common stock from treasury, pursuant to the 2010 Equity Incentive Plan, with a fair value of \$88,524 for director fees in lieu of cash payments. No such grants were issued in 2016.

In 2017, no shares were issued as a result of the exercise of stock options. In 2016, 15,000 shares were issued from treasury as a result of the exercise of stock options.

No warrants were exercised in 2017 or 2016.

No dividends were declared or paid in 2017 or 2016.

Warrants

In connection with the subordinated promissory notes issued in December 2013 (see Note 5), the Company issued warrants to purchase 100,000 shares of the Company's common stock. The warrants were exercisable through December 2016 at an exercise price of \$3.51 per share. In 2014, 30,000 warrants were exercised. No warrants were exercised in 2015 or 2016. In October 2016, in connection with the extension of the maturity dates of the subordinated promissory notes, the expiration date of the remaining 70,000 warrants was extended to December 31, 2018. The Company determined that the amendment represented a debt modification and did not constitute an extinguishment for accounting purposes (see Note 5). The exercise price remained unchanged at \$3.51 per share. The 70,000 warrants remain unexercised at December 31, 2017.

Stock options and Share-Based Incentive Plan

In March 2010, the Company's Board of Directors adopted the Micron Solutions, Inc. 2010 Equity Incentive Plan (the "Plan"). The Plan authorizes the issuance of an aggregate of 500,000 shares. The Plan provides the Company flexibility to award a mix of stock options, equity incentive grants, performance awards and other types of stock-based compensation to certain eligible employees, non-employee directors, or consultants and under which an aggregate of 500,000 shares have been reserved for such grants. The options granted have ten year contractual terms that vest annually between three to five-year terms.

At December 31, 2017, there were options to acquire an aggregate of 205,500 shares outstanding. At December 31, 2016, there were options to acquire an aggregate of 214,500 shares outstanding.

At December 31, 2017 and 2016, there were 282,000 and 273,000 shares available for future grants under the Plan, after giving effect to shares which became available for reissuance due to expired or forfeited options.

The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model that uses the assumptions noted in the following table. Expected volatilities are based on historical volatility of the Common Stock using

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historical periods consistent with the expected term of the options. The expected term of options granted under the Company's equity incentive plan, all of which qualify as "plain vanilla," is based on the average of the contractual term and the vesting period as permitted under SEC Staff Accounting Bulletin Nos. 107 and 110. The risk-free rate is based on the yield of a U.S. Treasury security with a term consistent with the option.

During 2016 there were 45,000 new option grants. No options were granted in 2017. The assumptions used to measure the fair value of option grants in 2017 and 2016 were as follows:

	Year Ended December 31,	
	2017	2016
Expected option term	-	6.0 to 6.5
Expected volatility factor	-	23.7% to 24.4%
Risk-free rate	-	0.90% to 0.99%
Expected annual dividend yield	-	—%

The following table sets forth the stock option transactions for the year ended December 31, 2017:

	Number of options	Weighted Average Exercise Price	Weighted average remaining contractual term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2016	214,500	\$ 5.96	7.12	\$ 17,340
Forfeited	(7,000)	4.26		
Expired	(2,000)	3.67		
Outstanding at December 31, 2017	205,500	\$ 6.04	6.07	\$ 28,750
Exercisable at December 31, 2017	114,583	\$ 6.42	5.30	\$ 20,551
Exercisable at December 31, 2016	109,495	\$ 6.90	5.47	\$ 8,880

The total intrinsic value of options exercised during 2016 was \$30,600. For the years ended December 31, 2017 and 2016, share-based compensation expense related to stock options and the non-cash issuance of common stock amounted to \$48,129 and \$47,256, respectively, and is included in general and administrative expenses. As of December 31, 2017, there was \$79,737 of unrecognized compensation costs, respectively, related to non-vested share-based compensation arrangements granted under the stock option plan. This cost is expected to be recognized over a weighted average period of 1.7 years. The weighted average grant date fair value of options issued in 2016 was \$1.05.

10. Earnings per share

Basic earnings (loss) per share is computed by dividing net income (loss) available to common shareholders by the weighted average number of common shares outstanding. The computation of diluted earnings (loss) per share is similar to the computation of basic earnings (loss) per share except that the denominator is increased to include the average number of additional common shares that would have been outstanding if the dilutive potential common shares had been issued. In addition, the numerator is adjusted for any changes in net income (loss) that would result from the assumed conversions of those potential shares.

As of December 31, 2017 there were options to purchase 205,500 shares and warrants to purchase 70,000 shares of the Company's common stock outstanding, all of which were anti-dilutive. Therefore, none of these options or warrants were included in the calculation of loss per share in 2017.

As of December 31, 2016 there were options to purchase 214,500 shares and warrants to purchase 70,000 shares of the Company's common stock outstanding, all of which were anti-dilutive. Therefore, none of these options or warrants were included in the calculation of loss per share in 2016.

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The following table shows the calculation of earnings (loss) per share for the years ended December 31, 2017 and 2016:

	Year Ended December 31,	
	2017	2016
Net loss	\$ (1,355,096)	\$ (712,462)
Net loss available to common shareholders	\$ (1,355,096)	\$ (712,462)
Basic EPS:		
Weighted average common shares outstanding	2,824,061	2,816,516
Earnings (loss) per share - basic and diluted	\$ (0.48)	\$ (0.25)

11. Industry and Geographic Segments

The Company's Chief Operating and Decision Maker ("CODM") manages the operations and reviews the results of operations as a single reporting unit. While the Company operates its business as one segment, the Company has diversified manufacturing capabilities as evidenced by its product offerings across several industry categories supporting customers around the globe.

The following table sets forth, for the periods indicated, the consolidated revenue and percentages of revenue derived from the sales of the Company's products and services in certain industries.

	Revenue for the Year Ended December 31,			
	2017	%	2016	%
Medical	\$ 15,170,382	76	\$ 14,543,315	74
Automotive/Industrial	3,648,393	18	3,787,312	19
Military and Law Enforcement	417,358	2	744,738	4
Consumer Products	848,210	4	383,254	2
Other	18,319	—	179,598	1
Total	\$ 20,102,662	100	\$ 19,638,217	100

The following table sets forth, for the periods indicated, the consolidated revenue and percentages of revenue derived from the sales of all of the Company's products and services by geographic market.

	Revenue for the Year Ended December 31,			
	2017	%	2016	%
United States	\$ 11,721,117	58	\$ 12,206,761	62
Asia	4,641,806	23	4,283,180	22
Europe	1,629,297	8	1,677,100	9
Canada	1,998,683	10	1,268,817	6
Other	111,759	1	202,359	1
Total	\$ 20,102,662	100	\$ 19,638,217	100

12. Subsequent Events

Discharge of subordinated debt

On December 29, 2017, upon entering into the three-year asset based credit and security agreement, the Company obtained funds to discharge the remaining \$450,000 of subordinated debt. On December 29, 2017, the Company discharged one of the subordinated notes in the principal amount of \$100,000. The remaining five notes, totaling in aggregate outstanding principal amount of \$350,000, were discharged on January 2, 2018, including the subordinated notes held by the three related parties mentioned above (see Note 5 to the consolidated financial statements). The Company carried \$350,000 as restricted cash at December 31, 2017 for this purpose.