UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017

OR

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

FOR THE TRANSITION PERIOD FROM _____TO _____

Mechanical Technology, Incorporated

(Exact name of registrant as specified in its charter)

New York	**000-06890**	**14-1462255**
State or other jurisdiction of incorporation or organization	**(Commission File Number)**	**(IRS Employer Identification No.)**

325 Washington Avenue Extension, Albany, New York 12205

(Address of principal executive offices)

(518) 218-2550

(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
None	None

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

Common Stock

($0.01 par value)

(Title of class)

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

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

Indicate by checkmark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yesx Noo

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

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

Large accelerated filer o	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company x
	Emerging growth company o

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. o

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates as of June 30, 2017 (based on the last sale price of $1.10 per share for such stock reported on the over-the-counter market for that date) was $4,724,668.

As of March 23, 2018, the Registrant had 9,369,177 shares of common stock outstanding.

Documents incorporated by reference: Portions of the registrant's Proxy Statement for its 2018 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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PART I

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PART I

Item 1: Business

Unless the context requires otherwise in this Annual Report on Form 10-K, the terms "MTI," the "Company," "we," "us," and "our" refer to Mechanical Technology, Incorporated and "MTI Instruments" refers to MTI Instruments, Inc. Other trademarks, trade names, and service marks used in this Annual Report on Form 10-K are the property of their respective owners.

Mechanical Technology, Incorporated, a New York corporation, was incorporated in 1961. The Company's core business is conducted through MTI Instruments, Inc., a wholly-owned subsidiary incorporated in New York on March 8, 2000. The Company's operations are headquartered in Albany, New York where it designs, manufactures, and markets its products globally.

The Company also owns a 47.5% interest, which as of December 31, 2017 has a fair value of $0, in MeOH Power, Inc. (formerly MTI MicroFuel Cells, Inc.), which the Company operated as a subsidiary until December 31, 2013, at which time the majority interest was transferred to one of our directors. We do not expect our current interest in MeOH Power, Inc. to have a material impact on our results of operations or financial condition going forward.

MTI Instruments is a supplier of precision linear displacement solutions, vibration measurement and system balancing solutions, and wafer inspection tools. These tools and solutions are developed for markets that require the precise measurements and control of products processes for the development and implementation of automated manufacturing, assembly, and consistent operation of complex machinery.

As part of its strategy, MTI Instruments provides its customers with enabling sensors and sensing technologies that help advance manufacturing processes and new product development efforts. The demand for higher quality and lower cost products ranging from semiconductor chips to electronics and large items such as automobiles continues to drive Original Equipment Manufacturers (OEMs) and their suppliers to invest in technology and the capability to rapidly produce high quality products. The industry has moved towards flexible manufacturing doctrines around mass customization and production incorporating lean principles to reduce labor and waste, while increasing quality. Modern manufacturing advances at a very rapid pace with the help of automation controls and precision sensing technologies for operating equipment, processes in factories, and other applications with minimal or reduced human intervention. OEMs find that using automation helps them not only improve on quality, but also can save labor, energy and materials while significantly improving accuracy and precision. In some industries like semiconductors, fabrication facilities are fully automated and are aided by humans on a low frequency basis.

Using a combination of integrated smart robotics, manufacturing lines, and a myriad of sensors that measure ongoing equipment performance, monitoring and drive controls have resulted in significant advancements in productivity and quality in manufacturing. There is no question that the world is moving from classic manufacturing and assembly towards automation and measurement.

MTI Instruments has decades of experience in working with OEMs and their subcontractors in the supply of sensor, instruments and systems technology to incorporate into OEMs' equipment and major companies' manufacturing processes as they develop and implement new process, quality and automation controls. The Company has moved to a customer and market-based approach by targeting leading companies in specific market segments including the industrial and consumer electronics, automotive and other precision automated manufacturing industries, turbo machinery and the research and development aspects within these markets for both product and process improvements.

This same approach is driving the demand for engine vibration measurement and balancing. Ongoing efforts to improve engine performance and lower fuel consumption drive both military and commercial axial turbo-machinery operators to maintain their equipment at peak performance.

These market drivers are also providing opportunity and demand for MTI to enhance current and develop new products and technologies. This has become a central theme in our supporting a larger, more complex customer base. Our efforts to become more capable and competitive in operations and quality are being met by our well defined approach to lean manufacturing principles and the achievement of International Organization for Standardization (ISO) ISO 9001:2015 certification in 2017.

Automated Monitoring and Precision Automation Manufacturing

Automated monitoring allows companies and engineers to rectify system problems before they become costly repairs and maintenance costs. MTI's latest system has a non-magnetic paper-thin probe that allows users to measure and monitor gaps in high power generators, wind turbines, and other auxiliary equipment. Its Ethernet interface supports remote access to this critical information. Meanwhile, MTI is also supporting the world-wide need for OEMs to drive continuous improvement efforts through use of the most innovative manufacturing and assembly techniques in products and processes. Due to the level of precision required, these products or processes are managed through automated systems (Piezo positioners, robot guide, dielectric material/LED wafer inspection, etc.) and require precise measurement, data transmission, analysis and management.

MTI Instruments provides advanced linear displacement solutions for OEMs that can be incorporated into a tool or equipment manufactured by a company to monitor performance and/or achieve control ("in product application") or into a process to control the manufacture of parts or measure critical parameters of parts as they enter or leave a process ("in process applications").

MTI Instruments is a preferred supplier for applications that require complex and extremely precise measurement of intricate targets and assemblies. MTI Instruments uses its significant track record and experience in capacitance, laser and fiber optic technologies to make products that range from basic sensors to complete, fully integrated measurement systems. Applications include precision positioning, material surface measurements, off-center vibration measurements, and pattern recognition analysis.

Listed below are selected MTI Instruments' automated monitoring and precision automation manufacturing product offerings:

Product Model	**Description**
Accumeasure Series	Ultra-high precision capacitive systems offering nanometer accuracy. Ultra-high precision digital capacitive systems offering sub-nanometer accuracy.

Accumeasure D Series	
Microtrak PRO-2D	2D laser triangulation scanners that provide profile, displacement, and 3D images.
Microtrak TGS	Intuitive laser thickness systems using two single spot laser heads with digital linearization providing superb linearity.
MTI-2100 Fotonic Sensor Series	Fiber-optic based displacement sensor systems with high frequency response.

Axial Turbo Machinery

Turbo machines are categorized according to the type of flow. When the fuel and air flow is parallel to the axis of rotation, they are referred to as axial flow machines. MTI Instruments is a leader in the development and commercialization of vibration measurement and system balancing for axial type engines – typically medium and large turbo fan aircraft engines – for both military and commercial applications. In addition, we are exploring possibilities for expansion of its product offerings for a variety of applications within this market segment.

MTI Instruments designs and manufactures computer-based portable balancing systems (PBS) products which automatically collect and record engine vibration data, identifying vibration or balance trouble, and calculating a solution to the problem. These products are designed to quickly pinpoint engine vibration issues for improved fuel efficiency, lower maintenance cost and safety.

PBS products are used by major aircraft engine manufacturers, the U.S. and foreign militaries, and commercial airlines, as well as gas turbine manufacturers.

Listed below are selected MTI Instruments' axial turbo machinery product offerings and technologies:

Product Model	**Description**
PBS-4100+ Portable Balancing System	Provides easy to follow solutions for engine vibration and trim balancing problems.
PBS-4100R+ Test Cell Vibration Analysis & Trim Balancing System	Advanced trim balancing and diagnostics for engine test cells.
TSC-4800A Tachometer Signal Conditioner	Tachometer signal conditioner detects and conditions signals for monitoring, measuring, and indicating engine speeds.
1510A Calibrator	National Institute of Standards and Technology (NIST) traceable signal generator that outputs voltage signals useful to test and calibrate electronic equipment.

Industrial and Academic Research and Development (R&D)

Present-day research and process development is a core part of the modern business world; critical decisions are made from data and discoveries made through these efforts. As companies understand and profit from the benefits of organized R&D efforts, they also make further commitments and investments into new R&D cycles making internal R&D budgets reach higher and higher levels. R&D is also a tool for modern companies to proactively leapfrog competition and keep pace with trends, enhance manufacturing processes, and develop products to meet new customer demands.

MTI Instruments has a long track record of working with private sector companies as well as academic institutions on their R&D efforts. We have a dedicated line of tabletop linear displacement instruments, material testers, and wafer metrology tools that help provide valuable information to enhance products and processes. Our family of R&D related products are used widely in applications including wafer surface metrology, nano-material testing, and precision linear displacement and positioning. Our customers include testing and R&D departments in large industry and academia as well as process development laboratories focused in automotive, electronics, semiconductor, solar, and material development.

Listed below are MTI Instruments' industrial and academic R&D product offerings and technologies:

Product Model	**Description**
Accumeasure Digital Series	Ultra-high precision digital capacitive systems offering sub-nanometer accuracy.
Accumeasure Analog Series	Ultra-high precision capacitive displacement systems offering nanometer accuracy.
Tensile MicroStage	Specifically designed to fit under atomic force microscopes (AFMs), these MicroTensile Testers provide high resolution tensile, compression, fatigue and bend testing of up to 450 Newton (100 lbs).
Microtrak 4	Single spot laser sensor equipped with the latest complementary metal oxide semiconductor (CMOS) sensor technology with true digital data output.
Proforma 300i	Manual, non-contact measurement of semiconductor wafer thickness, total thickness variation and bow.
PV 1000	Manual tool for measuring thickness and bow of solar wafers.
MTI-2100 Fotonic Sensor Series	Fiber-optic based displacement sensor systems with high frequency response.

Marketing and Sales

MTI Instruments markets its products and services using selected and specific channels of distribution. In the Americas, for precision automated manufacturing and the R&D sectors, MTI Instruments uses a combination of direct sales and representatives. Overseas, particularly in Europe and Asia, MTI Instruments uses distributors and agents specific to our targeted end markets. For axial turbo machinery, MTI Instruments primarily sells directly to end users.

To supplement these efforts, we use both commercial and industrial search engines, targeted newsletters, purchased customer lists and participation in trade shows to identify and expand our customer base.

Product Development

MTI Instruments continuously conducts research to develop new and advance existing technologies in support of its business strategy. Along with innovation as a key hallmark to our efforts, we carefully consider a number of factors including customer needs, product or technology uniqueness, market trends, costs, the competitive landscape, and creative marketing and communications plans in developing our products. We take a customer-centered approach in order to find new ways to solve customer needs, engage with customers directly, and create a loyal customer base while offering a more compelling value proposition.

In 2017, we launched two different series of The Protrak™ 2D/3D, which is part of the Microtrak PRO-2D product line; the G series Protrak™ 2D/3D has a speed of up to 4000 hertz (Hz) or a capture rate of 3.6 million measurement points per second and resolutions as low as 3.3 microns. The HD series Protrak™ 2D/3D can achieve high speeds of up to 6000Hz and even better resolution - as low as 2.5 microns. Both products come in a variety of different measurement ranges and are offered with either red or blue visible laser light. The blue laser light is particularly useful with translucent materials including liquid crystal displays, quartz and glass.

In 2016, MTI Instruments introduced a paper-thin capacitance probe that is non-magnetic, a feature that allows the probe to conform and be bonded in a thin gap and also provide accurate measurement within surrounding magnetic fields. This paper-thin probe, together with the recently launched Accumeasure D, is designed to be used to measure and monitor gaps in high power generators, wind turbines, and other auxiliary equipment. In addition, its Ethernet interface supports remote access to critical information.

We launched an additional line of SEMtester products to support the growing AFM users in the R&D market. The MTI Tensile MicroStage is designed with a reduced height to fit under AFMs or other adjustable lens microscopes. This new MicroStage also uses lightweight materials to meet air table and motorized stage requirements.

We also launched, during 2016, a line of Accumeasure D capable of measuring the thickness of non-conductive materials such as glass, plastic sheet and sapphire wafer (used in white light-emitting diode (LED) manufacturing). Additionally, we continue to invest in the development of a system to measure defects in industrial tool and internal thread inspection that utilizes our Accumeasure D series of products.

Also during 2016, we enhanced the PBS 4100+ to accommodate the latest generation of fuel-efficient aircraft engines.

With investments in research and product development, we seek to achieve a competitive position by continuously advancing our technology, producing new state-of-the-art precision measurement equipment, expanding our worldwide distribution, and providing a high level customer support based on our in-depth understanding and knowledge of our customers' businesses and needs. Management believes that MTI Instruments' success depends to a large extent on identifying market requirements, innovation, and utilizing our technological expertise to develop and implement new products.

Product Manufacturing & Operations

We conduct research, product development and innovation, and manufacture our products, in the United States. While many companies in the sensor, instrument and systems markets have manufacturing operations overseas, MTI is and has always been a U.S.-based manufacturing company. Products are conceived, developed, tested, and shipped out from our headquarters in Albany, New York.

Management believes that there are inherent advantages in keeping manufacturing in the U.S., including reducing the risk of inadvertent technology transfer, the ability to control manufacturing quality, and a much more effective customer management and satisfaction process. We have long-term vendor relationships and believe that most raw materials used in our products are readily available from a variety of vendors.

To prepare for future growth, we have also made strides in bringing a more flexible approach to manufacturing. While cross-training our employees in operations in different functional areas, management has also implemented lean principles on the manufacturing floor to increase capacity, productivity and throughput, eliminate waste, and quickly adapt to larger customers' demands while continuing to keep inventory levels under control. MTI has additional capabilities in its existing, flexible manufacturing space as production volumes increase.

In April 2017, the Company received ISO certification 9001:2015. The certification was authorized by TÜVRheinland®, an independent agency. To obtain this certification, we underwent a rigorous five step process including preparation, documentation, implementation, internal audit, and final certification. The ISO 9001:2015 certification confirms our commitment to an effective management system and continuous improvement, a practice management believes is important for continuous growth.

Intellectual Property and Proprietary Rights

We rely on trade secret and copyright laws to establish and protect the proprietary rights of our products. In addition, we enter into standard confidentiality agreements with our employees and consultants and seek to control access to and distribution of our proprietary information. Even with these precautions, however, it may be possible for a third party to copy or otherwise obtain and use our products or technology without authorization or to develop similar technology independently. In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign countries.

Significant Customers

MTI Instruments' largest customer is the U.S. Air Force. We also have strong relationships with companies in the electronics, aircraft, aerospace, automotive, semiconductor and research industries. The U.S. Air Force accounted for 20.1% and 18.1%, respectively, of total product revenues during 2017 and 2016. The largest commercial customer in 2017 was a manufacturer of semiconductor equipment in Asia, which accounted for 10.0% of total product revenue during 2017. The largest commercial customer in 2016 was an Asian distributor, which accounted for 8.1% of total product revenue during 2016.

Competition

We compete with several companies, several of which are substantially larger than MTI Instruments.

In the precision automated manufacturing market, MTI Instruments faces competition from companies including Keyence, Micro Epsilon, Schmitt Industries, Capacitec, Microsense and Lion Precision Instruments.

In the axial turbo machinery market, MTI Instruments competes with companies including ACES Systems and Meggitt Sensing Systems.

In the R&D market, we compete with companies involved in material testing, including Gatan, Deben, and E+H Metrology GmbH. Competitors in precision linear displacement include Keyence, Micro Epsilon, Schmitt Industries, Capacitec, Microsense and Lion Precision Instruments.

The primary competitive considerations in MTI Instruments' markets are product quality, performance, price, timely delivery, responsiveness and the ability to identify, pursue and obtain new customers. MTI Instruments believes that its employees, product development skills, sales and marketing systems and reputation are competitive advantages.

Research and Development

MTI Instruments conducts research and develops technology to support its existing products and develop new products. MTI incurred research and development costs of approximately $1.1 million and $1.2 million for the years ended December 31, 2017 and 2016, respectively. We expect to continue to invest in research and development in the future at MTI Instruments as part of our growth strategy.

Employees

As of December 31, 2017, we had 27 employees including 23 full-time employees.

Recent Developments

On March 19, 2018, the Company filed a Form 15 with the Securities and Exchange Commission ("SEC") terminating the registration of its common stock, par value $0.01 per share, thereby suspending its obligations to file periodic and current reports and other filings with the SEC, including annual reports on Form 10-K and quarterly reports on Form 10-Q for years beginning after December 31, 2017. We expect the deregistration of our common stock to result in significant cost savings to MTI in the near term from the elimination of complying with SEC reporting requirements. Also, the deregistration of the common stock will allow the Company to avoid the substantial additional costs associated with the compliance and auditing requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and to focus its resources on increasing long-term growth. Although we will not be required to do so, following deregistration we plan to continue to provide stockholders with annual audited financial statements and quarterly unaudited financial statements through the OTC Markets Group ("OTC Markets") website.

Item 1A: Risk Factors

Factors Affecting Future Results

This Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Any statements contained, or incorporated by reference, in this Annual Report on Form 10-K that are not statements of historical fact may be forward-looking statements. When we use the words "anticipate," "estimate," "plans," "projects," "continuing," "ongoing," "expects," "management believes," "we believe," "we intend," "should," "could," "may," "will" and similar words or phrases, identifying forward-looking statements. Such forward-looking statements include, but are not limited to, statements regarding:

- anticipated growth, including in revenues and cash flows;
- statements with respect to management’s strategy and planned initiatives;
- management’s belief that it will have adequate resources to fund the Company’s operations and capital expenditures for the year ending December 31, 2018 and through at least the end of the first quarter of 2019;
- the expected impact of recent and pending accounting standards or updates;
- the expectation that future cost-cutting measures will be avoided;
- future capital expenditures and spending on research and development;
- expected funding of future cash expenditures; and
- the expected impact of our investment in MeOH Power, Inc.

Forward-looking statements involve risks, uncertainties, estimates and assumptions that may cause our actual results, performance or achievements to be materially different from those expressed or implied by forward-looking statements. Important factors that could cause these differences include the following:

- sales revenue growth may not be achieved or maintained;
- the dependence of our business on a small number of customers and potential loss of government contracts - particularly in light of potential cuts that may be imposed as a result of U.S. government budget appropriations;
- our lack of long-term purchase commitments from our customers and the ability of our customers to cancel, reduce, or delay orders for our products;
- our inability to build and maintain relationships with our customers;
- our inability to develop and utilize new technologies that address the needs of our customers;
- our inability to obtain new credit facilities;
- the cyclical nature of the electronics and military industries;
- the uncertainty of the U.S. and global economy;
- the impact of future exchange rate fluctuations;
- failure of our strategic alliances to achieve their objectives or perform as contemplated and the risk of cancellation or early termination of such alliance by either party;
- the loss of services of one or more of our key employees or the inability to hire, train, and retain key personnel;
- risks related to protection and infringement of intellectual property;
- our occasional dependence on sole suppliers or a limited group of suppliers;
- our ability to generate income to realize the tax benefit of our historical net operating losses;
- risks related to the limitation of the use, for tax purposes, of our net historical operating losses in the event of certain ownership changes; and
- other risks discussed below.

Except as may be required by applicable law, we do not undertake or intend to update or revise our forward-looking statements, and we assume no obligation to update any forward-looking statements contained in, or incorporated by reference into, this Annual Report on Form 10-K as a result of new information or future events or developments. Thus, assumptions should not be made that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

Risk Factors

You should consider carefully the following risks, along with other information contained in this Annual Report on Form 10-K. The risks and uncertainties described below are not the only ones that may affect us. Additional risks and uncertainties also may adversely affect our business and operations including those discussed in the heading "Factors Affecting Future Results" above. Any of the following events, should they actually occur, could materially and adversely affect our business and financial results.

If we are unsuccessful at addressing our business challenges, we may not be able to maintain profitability, our business and results of operations and financial condition may be adversely affected and our ability to invest in and grow our business could be limited.

We have incurred significant operating and net losses since our inception. Although we had net income of $582 thousand during the year ended December 31, 2017, we incurred a net loss for the three prior fiscal years and had an accumulated deficit of $120.4 million at December 31, 2017. In order to consistently maintain profitability and improve liquidity, we must successfully achieve all or some combination of the following initiatives: increasing sales, developing new products, controlling operating expenses, managing our cash flows, successfully obtaining new credit facilities, improving operational efficiencies and estimating and projecting accurately our liquidity and capital resources. In "Management's Discussion and Analysis of Financial Condition and Results of Operations — Management's Plan, Liquidity and Capital Resources" in this Annual Report on Form 10-K, we have made estimates regarding our cash flow and results of operations for the year ending December 31, 2018 and through the end of the first quarter of 2019. If our cash flow or results of operations are less favorable than we have estimated, we may not be able to make all of our planned operating or capital expenditures or fully execute all of our other plans. Our financial success depends in part on management's ability to execute our growth strategy. We expect that we will depend primarily on cash generated by our operations for funds to pay our expenses and any other indebtedness we may incur. Our ability to make these payments depends on our future performance, which will be affected by financial, business, economic and other factors, many of which we cannot control. Our business may not generate sufficient cash flows from operations in the future and our currently anticipated growth in revenues and cash flows may not be realized, either or both of which could result in our being unable to repay indebtedness or to fund other liquidity needs. If we do not have enough money, we may be required to sell assets or borrow money, in each case on terms that may not be acceptable to us. In addition, the terms of any future debt agreements, including new lines of credit, may restrict us from adopting any of these alternatives. Further, any significant levels of indebtedness in the future could place us at a competitive disadvantage compared to our competitors that may have access to additional resources or proportionately less debt and could make us more vulnerable to economic downturns and adverse developments in our business. Any future loss incurred by the Company could have a material adverse effect on our business and our ability to generate the cash needed to operate our business. Although we generated net income in 2017, 2014, 2013 and 2011, we incurred a net loss during each of 2016, 2015 and 2012 and prior to 2011 we had incurred net losses since 1998, and we may not be able to sustain consistent profitability in the future. If we do achieve consistent profitability in the future, the level of any profitability cannot be predicted and may vary significantly from quarter to quarter and from year to year. Failure to continue to successfully implement these initiatives could prevent us from maintaining profitability and otherwise have a material adverse effect on our business plans, liquidity, results of operations and financial condition and may result in a downsize to the business. Further, even if implemented successfully there is no guarantee that our efforts in this regard would result in sustained and improving profitability.

We currently derive all of our product revenue from our MTI Instruments business.

All of our revenue is currently derived from our MTI Instruments business. We do not have a broad portfolio of other products we could rely on to support operations if we were to experience a substantial slowdown in our MTI Instruments business, which is subject to a number of risks, including:

- dependence on a limited number of customers;
- the potential for a slowdown or cancellation of sales to the military as a result of a potential redeployment of, or cuts in, government funding;
- our ability to maintain, improve, or expand our channels of distribution;
- the potential failure to expand or maintain our business as a result of competition, a lack of brand awareness, or market saturation; and
- an inability to launch new products as a result of intense competition, uncertainty of new technology development, or limited or unavailable resources to fund development.

In addition, revenues from the sale of MTI Instruments' products can vary significantly from one period to the next. We may sell a significant amount of our products to one or a few customers for various short term projects in one period, and then have markedly decreased sales in following periods as these projects end or customers have the products they require for the foreseeable future. The fact that we sell a significant amount of our products to a limited number of customers also results in a customer concentration risk. The loss of any significant portion of such customers or a material adverse change in the financial condition of any one of these customers could have a material adverse effect on our revenues, our business and our ability to generate the cash needed to operate our business.

We may not be able to enhance our product solutions and develop new product solutions in a timely manner.

Our future operating results will depend to a significant extent on our ability to provide new products that compare favorably with alternative solutions on the basis of time to introduction, cost, performance, and end-user preferences. Our success in attracting and retaining customers and developing business will depend on various factors, including the following:

- innovative development of new products for customers;
- utilization of advances in technology;
- maintenance of quality standards;
- efficient and cost-effective solutions; and

- timely completion of the design and introduction of new products.

Our inability to develop new product solutions on a timely basis could harm our operating results and impede our growth.

Recently enacted tariffs on certain imports to the United States and other potential changes to U.S. tariff and import/export regulations may have a negative effect on global economic conditions and our business, financial results and financial condition.

On March 8, 2018, President Trump implemented new tariffs on imports of steel and aluminum into the United States, although Canada and Mexico are temporarily exempt pending the outcome of certain trade negotiations and there is flexibility for other countries to be exempted at a later date. These tariffs went into effect on March 25, 2018. Further, there has been ongoing discussions and activities regarding changes to other U.S. trade policies and treaties, including threats by the United States to withdraw from certain treaties and other countries signing new trade agreements without U.S. participation. These developments may have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global trade and, in particular, trade between the impacted nations and the United States. Any of these factors could depress economic activity and restrict our access to suppliers or customers and have a material adverse effect on our business, financial condition and results of operations.

In particular, the new tariffs could have a negative impact on MTI in a number of ways. While any steel and aluminum we use in our products in produced solely in the United States, the new tariffs may provide domestic steel and aluminum producers the flexibility to increase their prices, at least to a level where their products would still be priced below foreign competitors once the tariffs are taken into account. Any price increases, to the extent we did not pass such increases on to our customers, would likely increase our cost of product revenue and, as a result, decrease our gross margins, operating income and net income, which could have a material adverse effect on our financial condition. On the other hand, if we attempt to pass any such increases on to our customers, that may result in lower sales, which would likely decrease our net income and could have a material adverse effect on our financial condition. In addition, in response to the new tariffs, a number of other countries are threatening to impose tariffs on U.S. imports, which, if implemented, could increase the price of our products in these countries and may result in our customers looking to alternative sources for our products. This would result in decreased sales, which could have a negative impact on our net income and financial condition.

We anticipate possible further changes to current policies by the U.S. government that could affect our business, including potentially through import tariffs on other materials or products and other changes in U.S. trade relations with other countries (e.g., China). Our suppliers source some of their raw materials from foreign countries, so other tariffs imposed by the U.S. government on imports into the United States may increase our cost of product revenue and, as a result, decrease our gross margins, operating income and net income, which could have a material adverse effect on our financial condition. Further, the imposition of such tariffs, and other recent and potential actions of the U.S. government with respect to other countries, may generate negative views of the United States in other countries and make persons in those countries less inclined to purchase products from U.S. companies like us.

The tariffs enacted on March 8 have just recently gone into effect and are subject to a number of uncertainties, including future adjustments and changes in the countries excluded from such tariffs. The ultimate reaction of other countries, and the impact of these tariffs on the United States, the global economy and our business, financial condition and results of operations, cannot be predicted at this time, nor can we predict the impact of any other actions, including U.S. withdrawal from or attempted renegotiation of trade treaties, that may be undertaken by the current administration with respect to global trade.

Our operating results may experience significant fluctuations.

In addition to the variability resulting from the short-term nature of our customers’ commitments, other factors contribute to significant periodic fluctuations in our results of operations. These factors include:

- the cyclicality of the markets we serve;
- the timing and size of orders;
- the volume of orders relative to our capacity;
- product introductions and market acceptance of new products or new generations of products;
- evolution in the life cycles of our customers’ products;
- timing of expenses in anticipation of future orders;
- changes in product mix;
- availability of manufacturing and assembly services;
- changes in cost and availability of labor and components;
- timely delivery of product solutions to customers;
- pricing and availability of competitive products;
- introduction of new technologies into the markets we serve;
- pressures on reducing selling prices;

- our success in serving new markets; and
- changes in economic conditions.

If we do not keep pace with technological innovations, our products may not be competitive and our revenue and operating results may suffer.

The electronic, semiconductor, solar, automotive and general industrial segments are subject to constant technological change. Our future success will depend on our ability to respond appropriately to changing technologies and changes in product function and quality. If we rely on products and technologies that are not attractive to end users, we may not be successful in capturing or retaining market share. Technological advances, the introduction of new products, and new design techniques could adversely affect our business prospects unless we are able to adapt to the changing conditions. Technological advances could render our products obsolete, and we may not be able to respond effectively to the technological requirements of evolving markets. As a result, we will be required to expend substantial funds for and commit significant resources to:

- continue research and development activities on all product lines;
- hire additional engineering and other technical personnel; and
- purchase advanced design tools and test equipment.

Our business could be harmed if we are unable to develop and utilize new technologies that address the needs of our customers, or our competitors do so more effectively than we do.

Our efforts to develop new technologies may not result in commercial success and/or may result in delays in development, which could cause a decline in our revenue and could harm our business.

Our research and development efforts with respect to our technologies may not result in customer or market acceptance. Some or all of those technologies may not successfully make the transition from the research and development lab to cost-effective production as a result of technology problems, competitive cost issues, yield problems, and other factors. Even when we successfully complete a research and development effort with respect to a particular technology, our customers may decide not to introduce or may discontinue products utilizing the technology for a variety of reasons, including the following:

- difficulties with other suppliers of components for the products;
- superior technologies developed by our competitors and unfavorable comparisons of our solutions with these technologies;
- price considerations; and
- lack of anticipated or actual market demand for the products.

The nature of our business will require us to make continuing investments to develop new technologies. Significant expenses relating to one or more new technologies that ultimately prove to be unsuccessful for any reason could have a material adverse effect on us. In addition, any investments or acquisitions made to enhance our technologies may prove to be unsuccessful. If our efforts are unsuccessful, our business could be harmed.

Adverse changes in economic or other market conditions in the United States and globally may have serious implications for the growth and stability of our business and could otherwise adversely affect our business, results of operations and financial condition.

Revenue growth and continued profitability of our business will depend significantly on the overall demand for test and measurement instrumentations in key markets including research and development, automotive, semiconductor and electronics. The U.S. and global economy has been historically cyclical and market conditions continue to be challenging, which has resulted in individuals and companies delaying or reducing expenditures. Since the recession ended almost nine years ago, economic growth has been slow by historic standards and uneven. Further, the current expansion is already the third longest in U.S. history, and many economists believe that the risk of a recession in the medium-term (2019-2020) is increasing. Softening demand in our target markets caused by a return to recessionary conditions or prolonged stagnant or deteriorating economic conditions, economic uncertainties even outside a recession, including concerns about U.S. debt levels and related governmental actions, new and potentially additional future tariffs on imports into the United States, Congress' inability to pass yearly budgets, and cuts in government spending, as well as technological developments, competitive changes or other factors, may result in decreased demand for our products and/or increased costs and, therefore, lower revenue and earnings. Delays or reductions in spending by our customers and potential customers resulting from these or other factors could have a material adverse effect on demand for our products, and consequently on our business, financial condition, results of operations, prospects, stock price, and ability to continue to operate.

Variability of customer requirements resulting in cancellations, reductions, or delays may adversely affect our operating results.

We are required to provide rapid product turnaround and respond to short lead times. A variety of conditions, both specific to individual customers and generally affecting the demand for OEMs' products, may cause customers to cancel, reduce, or delay orders. Cancellations, reductions, or delays by a significant customer or by a group of customers could adversely affect our operating results. Conversely, if our customers unexpectedly and significantly increase product orders, we may be required to rapidly increase production, which could strain our resources and reduce our margins.

The cyclical nature of the electronics and military industries may result in fluctuations in our operating results.

The electronics and military industries have experienced significant economic downturns at various times. These downturns are characterized by diminished product demand, accelerated erosion of average selling prices, and production overcapacity. We may seek to reduce our exposure to industry downturns by providing design and production services for leading companies in rapidly expanding industry segments. We may, however, experience substantial period-to-period fluctuations in future operating results because of general industry conditions or events occurring in the general economy.

International sales risks could adversely affect our operating results. Furthermore, our operating results could be adversely affected by changes to U.S. policy and fluctuations in the value of the U.S. dollar against foreign currencies.

Having a worldwide distribution network for our products exposes us to various economic, political, and other risks that could adversely affect our operations and operating results, including the following:

- unexpected changes in regulatory requirements;
- timing to meet regulatory requirements;
- tariffs, duties and other trade barrier restrictions, as discussed further above;
- greater difficulty in collecting accounts receivable;
- the burdens and costs of compliance with a variety of foreign laws;
- potentially reduced protection for intellectual property rights; and
- political or economic instability in certain parts of the world.

If one or more of these risks associated with international sales materialize, it could negatively affect our operating results.

In addition, we transact our business in U.S. dollars and bill and collect our sales in U.S. dollars. In 2017, approximately 40.5% of our revenue was from customers located outside of the United States. It is possible that U.S. policy changes and uncertainty about policy could increase market volatility and currency exchange rate fluctuations. Market volatility and currency exchange rate fluctuations could impact our results of operations and financial condition related to transactions denominated in a foreign currency. A weakening of the dollar could cause our overseas vendors to require renegotiation of either the prices or currency we pay for their goods and services. Similarly, a strengthening of the dollar could cause our products to be more expensive for our international customers, which could impact price and margins and/or cause the demand for our products, and thus our revenue, to decline.

In the future, customers may negotiate pricing and make payments in non-U.S. currencies. If our overseas vendors or customers require us to transact business in non-U.S. currencies, fluctuations in foreign currency exchange rates could affect our cost of goods, operating expenses, and operating margins and could result in exchange losses. In addition, currency devaluation can result in a loss to us if we hold deposits of that currency. Hedging foreign currencies can be difficult, especially if the currency is not freely traded. We cannot predict the impact that future exchange rate fluctuations may have on our operating results.

Our confidentiality agreements with employees and others may not adequately prevent disclosure of our trade secrets and other proprietary information, which could limit our ability to compete.

We rely on trade secrets to protect our proprietary technology and processes. Trade secrets are difficult to protect. We enter into confidentiality and intellectual property assignment agreements with our employees, consultants, and other advisors. These agreements generally require that the other party keep confidential and not disclose to third parties confidential information developed by the party under such agreements or made known to the party by us during the course of the party's relationship with us. However, these agreements may not be honored and enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time-consuming, and the outcome is unpredictable. Our failure to obtain and maintain trade secret protection could adversely affect our competitive position.

We depend on key personnel who would be difficult to replace, and our business will likely be harmed if we lose their services or cannot hire additional qualified personnel.

Our success depends substantially on the efforts and abilities of our senior management and key personnel. The competition for qualified management and key personnel, especially engineers, is intense. Although we maintain non-competition and non-disclosure covenants with most of our key personnel, we do not have employment agreements with most of them. The loss of services of one or more of our key employees or the inability to hire, train, and retain key personnel, especially engineers, technical support personnel, and capable sales and customer-support employees outside the United States, could delay the development and sale of our products, disrupt our business, and interfere with our ability to execute our business plan.

Brookstone's ownership of 40.0% of the outstanding shares of our common stock gives it a controlling interest in the Company.

Brookstone Partners Acquisition, XXIV, LLC ("Brookstone"), owns approximately 40.0% of our outstanding shares of common stock and has designated three directors that sit on our six-member Board of Directors. Accordingly, Brookstone has the ability to exert a significant degree of influence or actual control over our management and affairs and, as a practical matter, will control corporate actions requiring shareholder approval, irrespective of how our other shareholders may vote, including the election of directors, amendments to our certificate of incorporation and bylaws, and the approval of mergers and other significant corporate transactions, including a sale of substantially all of our assets, and Brookstone may vote its shares in a manner that is adverse to the interests of our minority stockholders. For example, Brookstone will be able to prevent a merger or similar transaction, including a transaction in which stockholders will receive a premium for their shares, even if our other shareholders are in favor of such transaction. This concentration of voting control could deprive our investors of an opportunity to receive a premium for their shares of our common stock as part of a sale of the Company. Further, Brookstone's control position might adversely affect the market price of our common stock to the extent investors perceive disadvantages in owning shares of a company with a controlling shareholder.

Brookstone and its director designees may acquire interests and positions that could present potential conflicts with our and our shareholders' interests.

Brookstone and its director designees may make investments in companies and may, from time to time, acquire and hold interests in businesses that compete directly or indirectly with us. Brookstone and its director designees may also pursue, for their own accounts, acquisition opportunities that may be complementary to our business, and as a result, those acquisition opportunities might not be available to us. As part of our sale of 3,750,000 shares of our common stock to Brookstone in October 2016 and as required by Brookstone as a condition to purchasing the shares, our Board of Directors renounced, to the extent permitted by New York law, the Company's expectancy with respect to being offered an opportunity to participate in any business opportunity that is discovered by or presented to a director designee (a "Business Opportunity"), whether in such director designee's capacity as a director of the Company or otherwise. Accordingly, the interests of Brookstone and the designated directors with respect to a Business Opportunity may supersede ours, and Brookstone or its affiliates or the Brookstone-designated directors may be involved with businesses that compete with us and may pursue opportunities for the sole benefit of Brookstone and its affiliates without our involvement, for which we have limited recourse. Such actions on the part of Brookstone or its director designees could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may become subject to claims of infringement or misappropriation of the intellectual property rights of others, which could prohibit us from selling our products, require us to obtain licenses from third parties or to develop non-infringing alternatives, and subject us to substantial monetary damages and injunctive relief.

We may receive notices from third parties that the manufacture, use, or sale of any products we develop infringes upon one or more claims of their patents. Moreover, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, that may later result in issued patents that materially and adversely affect our business. Third parties could also assert infringement or misappropriation claims against us with respect to our future product offerings, if any. We cannot be certain that we have not infringed the intellectual property rights of any third parties. Any infringement or misappropriation claim could result in significant costs, substantial damages, and our inability to manufacture, market, or sell any of our product offerings that are found to infringe another person's patent. Even if we were to prevail in any such action, the litigation could result in substantial cost and diversion of resources that could materially and adversely affect our business. If a court determined, or if we independently discovered, that our product offerings violated third-party proprietary rights, there can be no assurance that we would be able to re-engineer our product offerings to avoid those rights or obtain a license under those rights on commercially reasonable terms, if at all. As a result, we could be prohibited from selling products that are found to infringe upon the rights of others. Even if obtaining a license were feasible, it may be costly and time-consuming. A court could also enter orders that temporarily, preliminarily, or permanently enjoin us from making, using, selling, offering to sell, or importing our products that are found to infringe on third parties' intellectual property rights, or could enter orders mandating that we undertake certain remedial actions. Further, a court could order us to pay compensatory damages for any such infringement, plus prejudgment interest, and could in addition treble the compensatory damages and award attorneys' fees. Any such payments could materially and adversely affect our business and financial condition.

If we are unable to protect our information systems against service interruption or failure, misappropriation of data or breaches of security, our operations could be disrupted, we could be subject to costly government enforcement actions and private litigation and our reputation may be damaged.

Our business involves the collection, storage and transmission of personal, financial or other information that is entrusted to us by our customers and employees. Our information systems also contain the Company's proprietary and other confidential information related to our business. Our efforts to protect such information may be unsuccessful due to the actions of third parties, computer viruses, physical or electronic break-ins, catastrophic events, employee error or malfeasance or other attempts to harm our systems. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems, change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures in time. We could also experience a loss of critical data and delays or interruptions in our ability to manage inventories or process transactions. Some of our commercial partners, such as those that help us maintain our websites, may receive or store information provided by us or our users through our websites. If these third parties fail to adopt or adhere to adequate information security practices, or fail to comply with our policies in this regard, or in the event of a breach of their networks, our customers’ information may be improperly accessed, used or disclosed.

If our systems are harmed or fail to function properly, we may need to expend significant financial resources to repair or replace systems or to otherwise protect against security breaches or to address problems caused by breaches. If we experience a significant security breach or fail to detect and appropriately respond to a significant security breach, we could be exposed to costly legal actions against us in connection with such incidents, which could result in orders or judgments forcing us to pay damages or fines or to take certain actions with respect to our information systems. Any incidents involving unauthorized access to or improper use of user information, or incidents that are a violation of our online privacy, could harm our brand reputation and diminish our competitive position. Any of these events could have a material and adverse effect on our business, reputation or financial results. Our insurance policies carry coverage limits, which may not be adequate to reimburse us for losses caused by security breaches.

In the future, we may experience an ownership change in the Company that would result in a limitation of tax attributes relating to the use of our net operating losses.

A corporation generally undergoes an “ownership change” when the ownership of its stock, by value, changes by more than 50 percentage points over any three-year testing period. In the event of an ownership change, Section 382 of the Internal Revenue Code of 1986 imposes an annual limitation on the amount of post-ownership change taxable income a corporation may offset with pre-ownership change net operating loss (“NOL”) carryforwards and certain recognized built-in losses.

We estimate that as of December 31, 2017, the Company and MTI Instruments have NOL carryforwards of approximately $52.0 million. Our ability to utilize these NOL carryforwards, including any future NOL carryforwards that may arise, may be limited by Section 382 if we undergo any further “ownership changes” as a result of subsequent changes in the ownership of our outstanding common stock pursuant to the exercise of MTI options outstanding, additional financings obtained, or otherwise.

Our risk management process may not identify all risks that we are subject to and will not eliminate all risk.

Our Enterprise Risk Management (“ERM”) process seeks to identify and address significant risks. Our ERM process uses the most recent integrated risk framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to assess, manage, and monitor risks. We believe that risk-taking is an inherent aspect of the pursuit of our growth and performance strategy. Our goals are to proactively manage risks in a structured approach in conjunction with strategic planning, with the intent to preserve and enhance shareowner value, and to manage prudently, rather than wholly avoiding, risks. We can mitigate risks and their impact on the Company, however, only to a limited extent, and no ERM process can identify all risks that we may face. Therefore, there may be risks that we are currently unaware of, that may develop in the future or that we currently consider immaterial. Further, our management of risks may prove inadequate. The emergence of risks of which we were unaware or are unable to manage could have a material adverse effect on our business, prospectus, financial condition and results of operations.

Acquisitions may have an adverse effect on our business.

We expect to continue searching for acquisitions as part of our long-term business strategy. Any such acquisitions will involve significant challenges and risks including that the transaction does not advance our business strategy, that we don’t realize a satisfactory return on the investment we make, that we may experience difficulty in the integration of new employees, business systems, and technology, or diversion of management’s attention from our ongoing businesses. If one or more of these risks materialize in connection with any future acquisitions, it could adversely affect our operating results or financial condition.

The deregistration of our shares of our common stock under the Exchange Act and our suspension of our periodic reporting obligations thereunder is likely to decrease the liquidity of our common stock and may result in a decrease in the trading price of our common stock.

As discussed above, on March 19, 2018, we filed a Form 15 with the SEC to deregister our common stock under the Exchange Act, thereby suspending our Exchange Act reporting obligations. Subsequent to the filing of the Form 15, our common stock was removed from the OTCQB venture stage marketplace of the OTC Markets quotation system and is now quoted on the on the OTC Pink – Current Information tier of the OTC Markets. As a lower-tier market than the OTCQB, trading volumes in our common stock may be lower than they were previously, which can impact the liquidity in our common stock and have an adverse impact on the market price of our common stock. Further, while we intend to continue to provide stockholders with annual audited financial statements and quarterly unaudited financial statements through the OTC Markets Group website, there can be no guarantee that we will do so, and even if we do stockholders and potential investors will have access to much less information about us than they did when we were required to file reports with the SEC pursuant to the Exchange Act. The lack of publicly available information about the Company may also have a negative impact on the liquidity and market price of our common stock.

Item 1B: Unresolved Staff Comments

Not applicable.

Item 2: Properties

We lease approximately 17,400 square feet of office, manufacturing and research and development space at 325 Washington Avenue Extension, Albany, NY 12205. The current lease agreement expires on November 30, 2019. We believe our facilities are generally well maintained and adequate for our current needs and for expansion, if required.

Item 3: Legal Proceedings

At any point in time, we may be involved in various lawsuits or other legal proceedings. Such lawsuits could arise from the sale of products or services or from other matters relating to our regular business activities, compliance with various governmental regulations and requirements, or other transactions or circumstances. We do not believe there are any such proceedings presently pending that could have a material effect on our business, financial condition 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

Our common stock is quoted on the OTC Markets quotation system on the OTC Pink – Current Information tier under the symbol "MKTY"; prior to March 20, 2018, our common stock quoted on the OTC Markets' OTCQB venture stage marketplace for early stage and developing U.S. and international companies. Investors can find Real-Time quotes and market information for the Company on www.otcmarkets.com. The following table sets forth the high and low bid information for our common stock as reported on the OTC Market Group quotation system for the periods indicated:

	High	Low
Fiscal Year Ended December 31, 2017		
First Quarter	$ 1.55	$ 0.93
Second Quarter	1.14	0.81
Third Quarter	1.06	0.90
Fourth Quarter	1.12	1.00
Fiscal Year Ended December 31, 2016		
First Quarter	$ 1.10	$ 0.70
Second Quarter	0.87	0.61
Third Quarter	1.19	0.45
Fourth Quarter	1.55	0.95

Holders

We have one class of common stock, par value $.01, and are authorized to issue 75,000,000 shares of common stock. Each share of the Company's common stock is entitled to one vote on all matters submitted to stockholders. As of December 31, 2017, there were 9,363,482 shares of common stock issued and outstanding. As of March 23, 2018, there were approximately 286 shareholders of record of the Company's common stock. The number of shareholders of record does not reflect the number of persons whose shares are held in nominee or "street" name accounts through brokers.

Dividends

We have never declared or paid dividends on our common stock and do not anticipate or contemplate paying cash dividends on our common stock in the foreseeable future. We currently intend to use all available funds to develop our business. We can give no assurance that we will ever have excess funds available to pay dividends. Any future determination as to the payment of dividends will depend upon critical requirements and limitations imposed by our credit agreements, if any, and such other factors as our Board of Directors may consider.

Item 6: Selected Financial Data

Not applicable.

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

The following discussion of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and the related notes included elsewhere in this Annual Report. This discussion contains forward-looking statements, which involve risk and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors, including those discussed in Item 1A: "Risk Factors" and elsewhere in this Annual Report.

Overview

MTI's core business is conducted through our wholly-owned subsidiary MTI Instruments. MTI Instruments is a supplier of precision linear displacement sensors, instruments and system solutions, vibration measurement and system balancing solutions, precision tensile measurement systems and wafer inspection tools, serving markets that require 1) the precise measurements and control of products and processes in automated manufacturing, assembly, and consistent operation of complex machinery, 2) engine balancing and vibration analysis systems for both military and commercial aircraft, 3) metrology tools for semiconductor and solar wafer characterization, and 4) tensile stage systems for materials testing and precision linear displacement gauges all for use in academic and industrial research and development settings. We are continuously working on ways to increase our sales reach, including expanded worldwide sales coverage and enhanced internet marketing.

Results of Operations

Results of Operations for the Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016.

The following table summarizes changes in the various components of our net income (loss) during the year ended December 31, 2017 compared to the year ended December 31, 2016.

(Dollars in thousands)	**Year Ended December 31, 2017**	**Year Ended December 31, 2016**	**$ Change**	**% Change**
Product revenue	$ 7,061	$ 7,056	$ 5	0.1%
Operating costs and expenses:				
Cost of product revenue	$ 2,234	$ 2,722	$ (488)	(17.9)%
Research and product development expenses	$ 1,149	$ 1,243	$ (94)	(7.6)%
Selling, general and administrative expenses	$ 3,090	$ 3,452	$ (362)	(10.5)%
Operating income (loss)	$ 588	$ (361)	$ 949	262.9%
Other expense, net	$ —	$ (7)	$ 7	100.0%
Income (loss) before income taxes	$ 588	$ (368)	$ 956	259.8%
Income tax (expense) benefit	$ (6)	$ 9	$ (15)	(166.7)%
Net income (loss)	$ 582	$ (359)	$ 941	262.1%

Product Revenue: Product revenue consists of revenue recognized from MTI Instruments' product lines.

Product revenue for the year ended December 31, 2017 remained comparable to that of 2016, with a higher concentration of Asian and European commercial sales in 2017. The increased activity in Asia was driven by sales to a manufacturer of semiconductor equipment, while the rise in European revenue was attributed to a power generation equipment manufacturer. These increases in international sales offset a decline in U.S. commercial engine vibration analysis system sales. The U.S. Air Force was the largest government customer for the years ended December 31, 2017 and 2016, and accounted for 20.1% and 18.1%, respectively, of our annual product revenue. For the year ended December 31, 2017, the largest commercial customer was a manufacturer of semiconductor equipment in Asia, which accounted for 10.0% of our annual product revenue. For the year ended December 31, 2016, the largest commercial customer was an Asian distributor of our general instrumentation products, which accounted for 8.1% of our annual product revenue.

Information regarding government contracts included in product revenue is as follows:

(Dollars in thousands)		Revenues for the Year Ended December 31,		Contract Revenues to Date December 31,	Total Contract Orders Received To Date December 31,
Contract[1]	**Expiration**	**2017**	**2016**	**2017**	**2017**
$9.35 million U.S. Air Force Systems, Accessories and Maintenance	06/30/2021 [2]	$ 1,049	$ 1,093	$ 2,142	$ 2,142

(1) Contract values represent maximum potential values at time of contract placement and may not be representative of actual results.
(2) Date represents expiration of contract, including the exercise of option extensions.

Cost of Product Revenue; Gross Margin: Cost of product revenue includes the direct material and labor cost as well as an allocation of overhead costs that relate to the manufacturing of products we sell. In addition, cost of product revenue also includes the labor and material costs incurred for product maintenance, replacement parts and service under our contractual obligations.

Cost of product revenue during the year ended December 31, 2017 compared to 2016 decreased by $488 thousand, or 17.9%, to $2.2 million from $2.7 million on a comparable sales volume. The primary reason for the decrease in the cost of product revenue was that the cost of product revenue in 2016 was inflated by a one-time, $350 thousand charge to inventory for excessive inventory amounts built in advance of an order that never materialized. Lower material costs, a change in the product mix, reduced charges for excess inventory stemming from improved procurement management and lower overhead costs from reduced staffing were responsible for the balance of the decrease in cost of product revenue during 2017. Gross profit, as a percentage of product revenue, rose from 61.4% during the year ended December 31, 2016 to 68.4% during the year ended December 31, 2017 due to the aforementioned reductions on the cost of product revenue on a comparable sales volume.

Research and Product Development Expenses: Research and product development expenses includes the costs of materials to build development and prototype units, cash and non-cash compensation and benefits for the engineering and related staff, expenses for contract engineers, fees paid to outside suppliers for subcontracted components and services, fees paid to consultants for services provided, materials and supplies consumed, facility related costs such as computer and network services, and other general overhead costs associated with our research and development activities, to the extent not reimbursed by our customers.

Research and product development expenses decreased $94 thousand during the year ended December 31, 2017 compared to 2016 due to reduced staffing and decreased material spending on current development projects.

Selling, General and Administrative Expenses: Selling, general and administrative expenses includes cash and non-cash compensation, benefits and related costs in support of our general corporate functions, including general management, finance and accounting, human resources, selling and marketing, information technology and legal services.

Selling, general and administrative expenses for the year ended December 31, 2017 decreased by $362 thousand, or 10.5%, to $3.1 million in 2017 from $3.5 million in 2016. This decrease is the result of staff reductions in the sales and administrative departments in conjunction with an organizational restructuring during the first quarter of 2017. 2017 expenses of $3.1 million included $398 thousand in one-time severance, reorganizational and acquisition activity costs.

Operating Income (Loss): Operating income was $588 thousand for the year ended December 31, 2017 compared to an operating loss of $361 thousand in 2016. This $949 thousand improvement, on a comparable sales volume, was a result of the factors noted above, that is, improvement in the gross margin, combined with decreased research and development and selling, general and administrative expenses.

Other Expense: Other expense was $7 thousand for the year ended December 31, 2016 and primarily related to a $6 thousand loss recorded on the disposal of equipment in the first quarter.

Income Tax (Expense) Benefit: Income tax expense for the year ended December 31, 2017 was $6 thousand and primarily relates to taxes paid to California. Our effective income tax rate for the year ended December 31, 2017 was 1%. Income tax benefit for the year ended December 31, 2016 was $9 thousand and primarily relates to a refund received from our year ended December 31, 2015 consolidated federal income tax return. Our effective income tax rate for the year ended December 31, 2016 was (2)%.

Net Income (Loss): Net income for the year ended December 31, 2017 was $582 thousand compared to a net loss of $359 thousand in 2016. The increase in net income during 2017 was attributable to the improvement in the gross margin and the decreased research and development and selling, general and administrative expenses.

Management's Plan, Liquidity and Capital Resources

Several key indicators of our liquidity are summarized in the following table:

(Dollars in thousands)	**Years Ended December 31,**	
	2017	**2016**
Cash	$ 3,828	$ 3,381
Working capital	4,780	3,990
Net income (loss)	582	(359)
Net cash provided by operating activities	363	522
Purchase of property, plant and equipment	(107)	(136)

The Company has historically incurred significant losses (the majority, until 2012, stemming from the direct methanol fuel cell product development and commercialization programs of its former subsidiary, MeOH Power, Inc.) and had a consolidated accumulated deficit of $120.4 million as of December 31, 2017. Management believes that the Company currently has adequate resources to avoid future cost-cutting measures that could adversely affect its business. As of December 31, 2017, we had no debt, $17 thousand in outstanding commitments for capital expenditures and approximately $3.8 million of cash available to fund our operations.

Based on business developments, including changes in production levels, staffing requirements and network infrastructure improvements, additional capital equipment may be required in the foreseeable future. We expect to spend approximately $100 thousand on capital equipment and $1.3 million in research and development on MTI Instruments' products during 2018. We expect to finance any future expenditures and continue funding our operations from our current cash position and our projected 2018 cash flows pursuant to management's plans. We may also seek to supplement our resources by obtaining credit facilities to fund operational working capital and capital expenditure requirements. Any additional financing, if required, may not be available to us on acceptable terms or at all.

While it cannot be assured, management believes that, due in part to our current working capital level, recent realignment in sales and operations and stabilized spending, the Company will have adequate resources to fund operations and capital expenditures for the year ending December 31, 2018 and through at least the end of the first quarter of 2019. However, if our revenue estimates are off either in timing or amount, the Company may need to implement additional steps to ensure liquidity including, but not limited to, the deferral of planned capital spending and/or delaying existing or pending product development initiatives. Such steps, if required, could potentially have a material and adverse effect on our business, results of operations and financial condition.

Debt

We had no credit facilities available or debt outstanding at either December 31, 2017 or December 31, 2016.

Backlog, Inventory and Accounts Receivable

At December 31, 2017, the Company's order backlog was $385 thousand, compared to $349 thousand at December 31, 2016. The increase in backlog was due to orders from our largest commercial customer with scheduled deliveries through the first half of 2018.

Our inventory turnover ratios and average accounts receivable days outstanding for the years ended December 31, 2017 and 2016 and their changes are as follows:

	Years Ended December 31, 2017	2016	Change
Inventory turnover	3.3	2.3	1.0
Average accounts receivable days outstanding	52	35	17

The increase in inventory turns is due to a 35% decrease in average inventory balances on a comparable annual sales volume due to improved inventory management in 2017.

The average accounts receivable days' outstanding increased 17 days during 2017 compared to the prior year due to a proportionate increase in international commercial sales, as international customers generally take a longer period to pay than U.S. commercial and government customers.

Off-Balance Sheet Arrangements

We have no off balance sheet arrangements.

Critical Accounting Policies and Significant Judgments and Estimates

The prior discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. Note 2 of the Consolidated Financial Statements included in this Annual Report on Form 10-K includes a summary of our most significant accounting policies. The preparation of these consolidated financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosure of assets and liabilities. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventories, income taxes and share-based compensation. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Periodically, our management reviews our critical accounting estimates with the Audit Committee of our Board of Directors.

The significant accounting policies that we believe are most critical to aid in fully understanding and evaluating our consolidated financial statements include the following:

Revenue Recognition. We recognize product revenue when there is persuasive evidence of an arrangement, delivery of the product to the customer or distributor has occurred, at which time title generally is passed to the customer or distributor, and we have determined that collection of a fixed fee is probable, all of which occur upon shipment of the product. If the product requires that we provide installation, all revenue related to the product is deferred and recognized upon the completion of the installation.

Inventory. Inventory is valued at the lower of cost or net realizable value of the inventory. We periodically review inventory quantities on hand and record a provision for excess or obsolete inventory based primarily on our estimated forecast of product demand, as well as based on historical usage. Demand and usage for products and materials can fluctuate significantly. A significant decrease in demand for our products could result in a short-term increase in the cost of inventory purchases and an increase of excess inventory quantities on hand. Therefore, although we make every effort to assure the accuracy of our forecasts of future product demand, any significant unanticipated changes in demand could have a significant impact on the value of our inventory and our reported operating results. If changes in market conditions result in reductions in the estimated net realizable value of our inventory below our previous estimate, we would increase our reserve in the period in which we made such a determination and record a charge to cost of product revenue.

Share-Based Payments. We grant options to purchase our common stock and award restricted stock to our employees and directors under our equity incentive plans. The benefits provided under these plans are share-based payments subject to the appropriate accounting provisions regarding Share-Based Payments. We use the fair value method of accounting with the modified prospective application, which provides for certain changes to the method for valuing share-based compensation. The valuation provisions apply to new awards and to awards that are outstanding on the effective date and subsequently modified. Under the modified prospective application, prior periods are not revised for comparative purposes.

We estimate the fair value of share-based awards on the date of grant using a Black-Scholes option-pricing model. The determination of the fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate, and expected dividends.

If factors change and we employ different assumptions for the accounting methodology during future periods, the compensation expense that we record may differ significantly from what we have recorded in the current period. Therefore, we believe it is important for investors to be aware of the high degree of subjectivity involved when using option-pricing models to estimate share-based compensation. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions, are fully transferable and do not cause dilution. Because our share-based payments have characteristics significantly different from those of freely traded options, and because changes in the subjective input assumptions can materially affect our estimates of fair values, in our opinion, existing valuation models, including the Black-Scholes Option Pricing model, may not provide reliable measures of the fair values of our share-based compensation. Consequently, there is a risk that our estimates of the fair values of our share-based compensation awards on the grant dates may bear little resemblance to the intrinsic values realized upon the exercise, expiration, cancellation, or forfeiture of those share-based payments in the future. Certain share-based payments, such as employee stock options, may expire worthless or otherwise result in zero intrinsic value as compared to the fair values originally estimated on the grant date and expensed in our financial statements. Alternatively, value may be realized from these instruments that are significantly in excess of the fair values originally estimated on the grant date and expensed in our financial statements. There currently is neither a market-based mechanism nor other practical application to verify the reliability and accuracy of the estimates stemming from these valuation models, nor a way to compare and adjust the estimates to actual values. Although the fair value of employee share-based awards is determined using a qualified option-pricing model, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction. Estimates of share-based compensation expenses are significant to our financial statements, but these expenses are based on the aforementioned option valuation model and will never result in our payment of cash.

Theoretical valuation models and market-based methods are evolving and may result in lower or higher fair value estimates for share-based compensation. The timing, readiness, adoption, general acceptance, reliability, and testing of these methods is uncertain. Sophisticated mathematical models may require voluminous historical information, modeling expertise, financial analyses, correlation analyses, integrated software and databases, consulting fees, customization, and testing for adequacy of internal controls.

For purposes of estimating the fair value of stock options granted using the Black-Scholes model, we use the historical volatility of our stock for the expected volatility assumption input to the Black-Scholes model, consistent with the accounting guidance. The risk-free interest rate is based on the risk-free zero-coupon rate for a period consistent with the expected option term at the time of grant. We do not currently pay nor do we anticipate paying dividends, but we are required to assume a dividend yield as an input to the Black-Scholes model. As such, we use a zero dividend rate. The expected option term is calculated based on our historical forfeitures and cancellation rates.

Income Taxes. We are subject to income taxes in the U.S. (federal and state). As part of the process of preparing our consolidated financial statements, we calculate income taxes for each of the jurisdictions in which we operate. This involves estimating actual current taxes due together with assessing temporary differences resulting from differing treatment for tax and accounting purposes that are recorded as deferred tax assets and liabilities. We periodically evaluate deferred tax assets, net operating loss carryforwards and tax credit carryforwards to determine their recoverability based primarily on our ability to generate future taxable income.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities, and any valuation allowance recorded against our net deferred tax assets. We considered all available evidence, both positive and negative, such as historical levels of income and future forecasts of taxable income amongst other items in determining our valuation allowance. In addition, our assessment requires us to schedule future taxable income in accordance with accounting standards that address income taxes to assess the appropriateness of a valuation allowance, which further requires the exercise of significant management judgment.

We account for taxes in accordance with the asset and liability method of accounting for income taxes. Under this method, we must recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. The impact of our reassessment of our tax positions for these standards did not have a material impact on our results of operations, financial condition, or liquidity.

We are also currently subject to audit in various jurisdictions, and these jurisdictions may assess additional income tax liabilities against us. Developments in an audit, litigation, or in applicable laws, regulations, administrative practices, principles, and interpretations could have a material effect on our operating results or cash flows in the period or periods in which such developments occur, as well as for prior and in subsequent periods.

Tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change, with or without notice, due to economic, political, and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes. There are many transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. Our effective tax rates could be affected by numerous factors, such as intercompany transactions, earnings being lower than anticipated in jurisdictions where we have lower statutory rates and higher than anticipated in jurisdictions where we have higher statutory rates, the applicability of special tax regimes, losses incurred in jurisdictions for which we are not able to realize the related tax benefit, changes in foreign currency exchange rates, entry into new businesses and geographies, changes to our existing businesses and operations, acquisitions and investments and how they are financed, changes in our stock price, changes in our deferred tax assets and liabilities and their valuation, and changes in the relevant tax, accounting, and other laws, regulations, administrative practices, principles, and interpretations. In addition, a number of countries are actively pursuing changes to their tax laws applicable to corporate multinationals, such as the recently enacted

U.S. tax reform legislation commonly referred to as the U.S. Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act”). Finally, foreign governments may enact tax laws in response to the 2017 Tax Act that could result in further changes to global taxation and materially affect our financial position and results of operations.

The 2017 Tax Act significantly changes how the U.S. taxes corporations. The 2017 Tax Act requires complex computations to be performed that were not previously required under U.S. tax law, significant judgments to be made in interpretation of the provisions of the 2017 Tax Act and significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The U.S. Treasury Department, the Internal Revenue Service, and other standard-setting bodies could interpret or issue guidance on how provisions of the 2017 Tax Act will be applied or otherwise administered that is different from our interpretation. As the Company interprets any such additional guidance, the Company may make adjustments to the provisional amounts recorded. Those adjustments may materially impact our provision for income taxes in the period in which the adjustments are made.

Recent Accounting Pronouncements

A discussion of recently adopted and new accounting pronouncements is included in Note 2 of the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8: Financial Statements and Supplementary Data

The Company's Consolidated Financial Statements begin on page F-1 and are incorporated in this Item 8 by reference.

Item 9: Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A: Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of MTI's disclosure controls and procedures as of December 31, 2017. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. We recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and we necessarily apply our judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2017, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

(b) Management's Report on Internal Control Over Financial Reporting

Management of our Company is responsible for establishing and maintaining adequate internal control over financial reporting, as that term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

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

Under the supervision and with the participation of our management, including the principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting using the criteria set forth in *Internal Control—Integrated Framework* (2013 version) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation using the criteria set forth in *Internal Control—Integrated Framework,* Management has concluded that our internal control over financial reporting was effective as of December 31, 2017.

This annual report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Our report was not subject to attestation by our independent registered public accounting firm pursuant to rules of the SEC that permit us to provide only Management's Report in this annual report.

/s/ Frederick W. Jones
Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)

(c) Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, during our fiscal quarter ended December 31, 2017 that have materially affected, or are reasonable likely to materially affect, our internal control over financial reporting.

Item 9B: Other Information

No information was required to be disclosed in a current Report on Form 8-K during the fourth quarter of the fiscal year covered by this Annual Report on Form 10-K that has not been reported.

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PART III

Item 10: Directors, Executive Officers and Corporate Governance

Code of Ethics: We have adopted a Code of Ethics for employees, officers and directors. A copy of the Code of Ethics is available on our website at https://www.mechtech.com under Company Info, Governance Documents.

The remaining information required by this Item 10 is incorporated herein by reference to the information appearing under the captions “Information about our Directors,” “Executive Officers,” “Board of Director Meetings and Committees – Audit Committee” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive Proxy Statement for our 2018 Annual Meeting of Stockholders to be filed with the SEC on or before April 30, 2018.

Item 11: Executive Compensation

The information required by this Item 11 is incorporated herein by reference to the information appearing under the caption “Executive Compensation” in the Company’s definitive Proxy Statement for our 2018 Annual Meeting of Stockholders to be filed with the SEC on or before April 30, 2018.

Item 12: Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Equity Compensation Plans

As of December 31, 2017, we have three equity compensation plans, each of which was originally approved by our stockholders; the Mechanical Technology Incorporated 2006 Equity Incentive Plan (the “2006 Plan”), the Mechanical Technology Incorporated 2012 Equity Incentive Plan and the Mechanical Technology Incorporated 2014 Equity Incentive Plan (collectively, the “Plans”). The 2006 Plan was amended and restated and approved by our Board of Directors in 2011 and 2009. See Note 11 of our Consolidated Financial Statements in this Annual Report on Form 10-K for a description of the Plans.

The following table presents information regarding these plans as of December 31, 2017:

Plan Category	Number of Securities To Be Issued Upon Exercise of Outstanding Options, Warrants, Rights[1] (a)	Weighted Average Exercise Price of Outstanding Options, Warrants, Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a)) [2] (c)
Equity compensation plans approved by security holders	682,839	$ 0.83	68,661
Equity compensation plans not approved by security holders[3]	83,500	0.74	-0-

(1) The securities available under the Plans for issuance and issuable pursuant to exercises of outstanding options may be adjusted in the event of a change in outstanding stock by reason of stock dividend, stock splits, reverse stock splits, etc.

(2) No awards can currently be made out of the 2006 Plan.

(3) Includes options outstanding under the 2006 Plan, which was amended by our Board of Directors without stockholder approval in 2009 and 2011 to increase the number of shares available for issuance thereunder. Under the 2006 Plan, the Board of Directors is authorized to issue stock options, stock appreciation rights, restricted stock, and other stock-based incentives to officers, employees and others. See Note 11 of our Consolidated Financial Statements in this Annual Report on Form 10-K for a further description of this Plan.

The remaining information required by this Item 12 is incorporated herein by reference to information appearing under the caption “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters” in our definitive Proxy Statement for our 2018 Annual Meeting of Stockholders to be filed with the SEC on or before April 30, 2018.

Item 13: Certain Relationships and Related Transactions, and Director Independence

The information required by this Item 13 is incorporated herein by reference to the information appearing under the captions “Certain Relationships and Related Transactions” and “Information about our Directors” in our definitive Proxy Statement for the 2018 Annual Meeting of Stockholders to be filed with the SEC on or before April 30, 2018.

Item 14: Principal Accounting Fees and Services

The information required by this Item 14 is incorporated herein by reference to the information appearing under the caption “Independent Registered Public Accounting Firm” in our definitive Proxy Statement for the 2018 Annual Meeting of Stockholders to be filed with the SEC on or before April 30, 2018.

PART IV

Item 15: Exhibits, Financial Statement Schedules

15(a) (1) Financial Statements: The financial statements filed herewith are set forth on the Index to Consolidated Financial Statements on page F-1 of the separate financial section which accompanies this Report, which is incorporated herein by reference.

15(a) (2) Financial Statement Schedules: Financial statement schedules not listed have been omitted because they are either not required, not applicable, or the information has been included elsewhere in the consolidated financial statements or notes thereto.

15(a) (3)

Exhibits: The exhibits listed in the Exhibit Index below are filed as part of this Annual Report on Form 10-K.

Exhibit Number	Description
3.1	Certificate of Incorporation of the registrant, as amended and restated (Incorporated by reference from Exhibit 3.1 of the Company's Form 10-K Report for the year ended December 31, 2007).
3.2	Certificate of Amendment of the Certificate of Incorporation of the registrant (Incorporated by reference from Exhibit 3.2 of the Company's Form 8-K Report filed May 15, 2008).
3.3	Certificate of Correction of Restated Certificate of Incorporation of Mechanical Technology, Incorporated as of October 17, 2016 and Certificate of Correction of Certificate of Amendment of the Certificate of Incorporation of Mechanical Technology Incorporated, as of October 17, 2016 (Incorporated by reference from Exhibit 3.1 of the Company's Form 8-K Report filed October 21, 2016).
3.4	Amended and Restated By-Laws of the registrant (Incorporated by reference from Exhibit 3.3 of the Company's Form 8-K Report filed December 14, 2007).
4.1	Rights Agreement, dated as of October 6, 2016, between Mechanical Technology, Incorporated and American Stock Transfer & Trust Company, LLC, as Rights Agent (Incorporated by reference from Exhibit 4.1 of the Company's Form 8-K Report filed October 6, 2016).

4.2	Amendment No. 1 dated as of October 20, 2016, to the Rights Agreement, dated as of October 6, 2016, between Mechanical Technology, Incorporated and American Stock Transfer & Trust Company, LLC, as Rights Agent (Incorporated by reference from Exhibit 4.2 of the Company's Form 8-K Report filed October 21, 2016).
10.1	Mechanical Technology, Incorporated Amended and Restated 2006 Equity Incentive Plan (Incorporated by reference from Exhibit 10.1 of the Company's Form 10-K Report for the year ended December 31, 2016).*
10.2	Form of Restricted Stock Agreement for Mechanical Technology, Incorporated Amended and Restated 2006 Equity Incentive Plan (Incorporated by reference from Exhibit 10.2 of the Company's Form 8-K Report filed July 11, 2011).*
10.3	Mechanical Technology, Incorporated Amended and Restated 2012 Equity Incentive Plan (Incorporated by reference from Exhibit 10.3 of the Company's Form 10-K Report for the year ended December 31, 2016).*
10.4	Form of Restricted Stock Agreement Notice for Board of Directors and Employees for Mechanical Technology, Incorporated 2012 Equity Incentive Plan (Incorporated by reference from Exhibit 10.2 of the Company's Form 10-Q Report for the quarter ended June 30, 2012).*
10.5	Form of Incentive Stock Option Notice for Employees for Mechanical Technology, Incorporated 2012 Equity Incentive Plan (Incorporated by reference from Exhibit 10.3 of the Company's Form 10-Q Report for the quarter ended June 30, 2012).*
10.6	Form of Non-Qualified Stock Option Notice for Employees for Mechanical Technology, Incorporated 2012 Equity Incentive Plan (Incorporated by reference from Exhibit 10.4 of the Company's Form 10-Q Report for the quarter ended June 30, 2012).*
10.7	Form of Non-Qualified Stock Option Notice for Board of Directors for Mechanical Technology, Incorporated 2012 Equity Incentive Plan (Incorporated by reference from Exhibit 10.5 of the Company's Form 10-Q Report for the quarter ended June 30, 2012).*
10.8	Mechanical Technology, Incorporated 2014 Equity Incentive Plan (Incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A filed with the Commission on April 25, 2014). *
10.9	Form of Restricted Stock Grant Agreement under the Mechanical Technology, Incorporated 2014 Equity Incentive Plan (Incorporated by reference from Exhibit 4.2 of the Company's Registration Statement on Form S-8 (File No. 333-196989) filed with the Commission on June 24, 2014). *
10.10	Form of Nonstatutory Stock Option Grant Agreement under the Mechanical Technology, Incorporated 2014 Equity Incentive Plan (Incorporated by reference from Exhibit 4.3 of the Company's Registration Statement on Form S-8 (File No. 333-196989) filed with the Commission on June 24, 2014). *
10.11	Form of Incentive Stock Option Grant Agreement under the Mechanical Technology, Incorporated 2014 Equity Incentive Plan (Incorporated by reference from Exhibit 4.4 of the Company's Registration Statement on Form S-8 (File No. 333-196989) filed with the Commission on June 24, 2014). *

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10.12	Lease dated August 10, 1999 between Carl E. Touhey and Mechanical Technology, Inc. (Incorporated by reference from Exhibit 10.38 of the Company's Form 10-K Report for the fiscal year ended September 30, 1999).
10.13	Amendment No. 1 to Lease Agreement Between Mechanical Technology Inc. and Carl E. Touhey dated September 29, 2009 (Incorporated by reference from Exhibit 10.166 of the Company's Form 10-K Report for the year ended December 31, 2009).
10.14	Amendment No. 2 to Lease Agreement Between MTI Instruments Inc. and Carl E. Touhey dated May 2, 2014 (Incorporated by reference from Exhibit 10.1 of the Company's Form 10-Q Report for the quarter ended March 31, 2014).
10.15#	Contract dated July 1, 2016 between Mechanical Technology, Incorporated and the U.S. Air Force (Incorporated by reference from Exhibit 10.1 of the Company's Form 10-Q Report for the quarter ended June 30, 2016).
10.16	Securities Purchase Agreement dated as of October 21, 2016, by and between Mechanical Technology, Incorporated and Brookstone Partners Acquisition XXIV, LLC (Incorporated by reference from Exhibit 10.22 of the Company's Form 8-K Report filed October 21, 2016).
10.17	Registration Rights Agreement dated as of October 21, 2016, by and between Mechanical Technology, Incorporated and Brookstone Partners Acquisition XXIV, LLC (Incorporated by reference from Exhibit 10.23 of the Company's Form 8-K Report filed October 21, 2016).
10.18	Form of Option Exercise and Stock Transfer Restriction Agreement between the Company and its Chief Executive Officer, Chief Financial Officer and Non-Employee Directors (Incorporated by reference from Exhibit 10.24 of the Company's Form 8-K Report filed October 21, 2016).
10.19	Separation Letter Agreement between Mechanical Technology, Incorporated and Kevin G Lynch (Incorporated by reference from Exhibit 10.25 of the Company's Form 8-K Report filed February 8, 2017). *
10.20	Side Letter Agreement dated March 29, 2017, amending the Option Exercise and Stock Transfer Restriction Agreement by and between Mechanical Technology, Incorporated and E. Dennis O'Connor (Incorporated by reference from Exhibit 10.2+ of the Company's Form 10-Q Report for the quarter ended March 31, 2017). *
10.21	Side Letter Agreement dated March 29, 2017, amending the Option Exercise and Stock Transfer Restriction Agreement by and between Mechanical Technology, Incorporated and Walter L. Robb (Incorporated by reference from Exhibit 10.3+ of the Company's Form 10-Q Report for the quarter ended March 31, 2017). *
10.22	Executive Employment Agreement, dated May 5, 2017, by and between Mechanical Technology, Incorporated and Frederick Jones (Incorporated by reference from Exhibit 10.1 of the Company's Form 8-K Report filed May 5, 2017).*
21	Subsidiaries of the Registrant (Incorporated by reference from Exhibit 21 of the Company's Form 10-K Report for the year ended December 31, 2015).
31.1	

	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

All exhibits for which no other filing information is given are filed herewith.

Certain portions of this exhibit have been omitted based upon a request for confidential treatment. The omitted portions have been filed with the Securities and Exchange Commission pursuant to our application for confidential treatment. The items are identified in the exhibit with “**”.

* Represents management contract or compensation plan or arrangement.

Item 16: Form 10-K Summary

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MECHANICAL TECHNOLOGY, INCORPORATED

Date: March 29, 2018	By:	/s/ Frederick W. Jones Frederick W. Jones Chief Executive Officer and Chief Financial Officer

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

Signature	Title	Date
/s/ Frederick W. Jones Frederick W. Jones	Chief Executive Officer, Chief Financial Officer and Secretary (Principal Executive, Principal Financial and Accounting Officer)	March 29, 2018
/s/ David C. Michaels David C. Michaels	Chairman	March 29, 2018
/s/ Edward R. Hirshfield Edward R. Hirshfield	Director	March 29, 2018
/s/ Matthew E. Lipman Matthew E. Lipman	Director	March 29, 2018
/s/ Thomas J. Marusak Thomas J. Marusak	Director	March 29, 2018
/s/ William P. Phelan	Director	

William P. Phelan		March 29, 2018
/s/ Michael Toporek	Director	
Michael Toporek		March 29, 2018

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and

Stockholders of Mechanical Technology, Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Mechanical Technology, Incorporated (the Company) as of December 31, 2017 and 2016, and the related consolidated statements of operations, changes in equity, and cash flows for each of the years in the two-year period ended December 31, 2017, 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 each of the years in the two-year period ended December 31, 2017, 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/ UHY LLP

We have served as the Company’s auditor since 2012.

Albany, New York

March 29, 2018

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 2017 and 2016

(Dollars in thousands, except per share)	December 31, 2017		December 31, 2016	
Assets				
Current Assets:				
Cash	$	3,828	$	3,381
Accounts receivable – less allowances of $2 in 2017 and $0 in 2016		1,406		881
Inventories		694		676
Prepaid expenses and other current assets		90		82
Total Current Assets		6,018		5,020
Property, plant and equipment, net		184		160
Total Assets	$	6,202	$	5,180
Liabilities and Stockholders' Equity				
Current Liabilities:				
Accounts payable	$	325	$	124
Accrued liabilities		913		906
Total Current Liabilities		1,238		1,030
Commitments and Contingencies (Note 12)				
Stockholders' Equity:				
Common stock, par value $0.01 per share, authorized 75,000,000; 10,378,975 issued in 2017 and 10,026,136 issued in 2016		104		100
Additional paid-in-capital		139,022		138,794
Accumulated deficit		(120,398)		(120,980)
Common stock in treasury, at cost, 1,015,493 shares in both 2017 and 2016		(13,764)		(13,764)
Total Stockholders' Equity		4,964		4,150
Total Liabilities and Stockholders' Equity	$	6,202	$	5,180

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

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

For the Years Ended December 31, 2017 and 2016

(Dollars in thousands, except per share)	**Year Ended December 31, 2017**	**Year Ended December 31, 2016**
Product revenue	$ 7,061	$ 7,056
Operating costs and expenses:		
Cost of product revenue	2,234	2,722
Research and product development expenses	1,149	1,243
Selling, general and administrative expenses	3,090	3,452
Operating income (loss)	588	(361)
Other expense, net	—	(7)
Income (loss) before income taxes	588	(368)
Income tax (expense) benefit	(6)	9
Net income (loss)	$ 582	$ (359)
Income (loss) per share (Basic)	$ 0.06	$ (0.06)
Income (loss) per share (Diluted)	$ 0.06	$ (0.06)
Weighted average shares outstanding (Basic)	9,129,178	5,988,545
Weighted average shares outstanding (Diluted)	9,332,676	5,988,545

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

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

For the Years Ended December 31, 2017 and 2016

(Dollars in thousands, except per share)	**Common Stock**				**Treasury Stock**		
	Shares	**Amount**	**Additional Paid-in Capital**	**Accumulated Deficit**	**Shares**	**Amount**	**Total Stockholders' Equity (Deficit)**
January 1, 2016	6,263,975	$ 63	$ 135,839	$ (120,621)	1,005,092	$ (13,754)	$ 1,527
Net loss	-	-	-	(359)	-	-	(359)
Stock based compensation	-	-	449	-	-	-	449
Issuance of shares – stock purchase	3,750,000	37	2,700	-	-	-	2,737
Costs of stock purchase	-	-	(201)	-	-	-	(201)
Issuance of shares – option exercises	12,161	-	7	-	-	-	7
Purchase of common stock for treasury	-	-	-	-	10,401	(10)	(10)
December 31, 2016	10,026,136	$ 100	$ 138,794	$ (120,980)	1,015,493	$ (13,764)	$ 4,150
Net income	-	-	-	582	-	-	582

Stock based compensation	-	-	41	-	-	-	41
Costs of stock purchase	-	-	(25)	-	-	-	(25)
Issuance of shares – option exercises	352,839	4	212	-	-	-	216
December 31, 2017	10,378,975	$ 104	$ 139,022	$ (120,398)	1,015,493	$ (13,764)	$ 4,964

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

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the Years Ended December 31, 2017 and 2016

(Dollars in thousands)	Year Ended December 31, 2017	Year Ended December 31, 2016
Operating Activities		
Net income (loss)	$ 582	$ (359)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation	81	85
Provision for (recovery of) bad debts	2	(21)
Stock based compensation	41	449
Provision for excess and obsolete inventories	(31)	365
Loss on disposal of equipment	2	6
Changes in operating assets and liabilities:		
Accounts receivable	(527)	71
Inventories	13	(35)
Prepaid expenses and other current assets	(8)	(10)
Accounts payable	201	(28)
Accrued liabilities	7	(1)
Net cash provided by operating activities	363	522
Investing Activities		
Purchases of equipment	(107)	(136)
Net cash used in investing activities	(107)	(136)
Financing Activities		
Proceeds from stock option exercises	216	7
Proceeds from stock purchase	—	2,737
Costs of stock purchase	(25)	(201)
Purchases of common stock for treasury	—	(10)
Net cash provided by financing activities	191	2,533
Increase in cash	447	2,919
Cash - beginning of period	3,381	462
Cash - end of period	$ 3,828	$ 3,381

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

MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Operations

Description of Business

Mechanical Technology, Incorporated (MTI or the Company), a New York corporation, was incorporated in 1961. The Company's core business is conducted through MTI Instruments, Inc. (MTI Instruments), its wholly-owned subsidiary.

MTI Instruments was incorporated in New York on March 8, 2000 and is a supplier of precision linear displacement solutions, vibration measurement and system balancing systems, and wafer inspection tools, consisting of electronic gauging instruments for position, displacement and vibration application within the industrial manufacturing/production markets, as well as the research, design and process development market; tensile stage systems for materials testing at academic and industrial research settings; and engine vibration analysis systems for both military and commercial aircraft. These tools, systems and solutions are developed for markets and applications that require the precise measurements and control of products, processes, and the development and implementation of automated manufacturing, assembly, and consistent operation of complex machinery.

Liquidity

The Company has historically incurred significant losses primarily due to its past efforts to fund direct methanol fuel cell product development and commercialization programs, and had a consolidated accumulated deficit of approximately $120.4 million as of December 31, 2017. As of December 31, 2017, the Company had working capital of approximately $4.8 million, no debt, $17 thousand in outstanding commitments for capital expenditures, and approximately $3.8 million of cash available to fund our operations.

Based on the Company's projected cash requirements for operations and capital expenditures, its current available cash of approximately $3.8 million and its projected 2018 cash flow pursuant to management's plans, management believes it will have adequate resources to fund operations and capital expenditures for the year ending December 31, 2018 and through the end of the first quarter of 2019. If cash generated from operations is insufficient to satisfy the Company's operational working capital and capital expenditure requirements, the Company may be required to obtain credit facilities, if available, to fund these initiatives. The Company has no other formal commitments for funding future needs of the organization at this time and any additional financing during 2018, if required, may not be available to us on acceptable terms or at all.

2. Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, MTI Instruments. All intercompany balances and transactions are eliminated in consolidation.

Use of Estimates

The consolidated financial statements of the Company have been prepared in accordance with United States of America Generally Accepted Accounting Principles (U.S. GAAP), which require 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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Fair Value of Financial Instruments

The Company's financial instruments consist of cash, accounts receivable and accounts payable. The estimated fair values of these financial instruments approximate their carrying values at December 31, 2017 and 2016. The estimated fair values have been determined through information obtained from market sources, where available.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are stated at the invoiced amount billed to customers and do not bear interest. An allowance for doubtful accounts, if necessary, represents the Company's best estimate of the amount of probable credit losses in its existing accounts receivable. The Company determines the allowance based on historical write-off experience and current exposures identified. The Company reviews its allowance for doubtful accounts monthly. Past due balances over 90 days and over a specified amount are reviewed individually for collectability. All other balances are reviewed on a pooled basis by type of receivable. Account balances are charged off against the allowance when the Company believes it is probable the receivable will not be recovered. The Company does not have any off-balance-sheet credit exposure related to its customers.

Inventories

Inventories are valued at the lower of cost (first-in, first-out) or net realizable value. The Company provides estimated inventory allowances for excess, slow moving and obsolete inventory as well as inventory whose carrying value is in excess of net realizable value.

Property, Plant, and Equipment

Property, plant and equipment are stated at cost and depreciated using the straight-line method over their estimated useful lives as follows:

Leasehold improvements	Lesser of the life of the lease or the useful life of the improvement
Computers and related software	3 to 5 years
Machinery and equipment	3 to 10 years
Office furniture, equipment and fixtures	2 to 10 years

Significant additions or improvements extending assets' useful lives are capitalized; normal maintenance and repair costs are expensed as incurred. The costs of fully depreciated assets remaining in use are included in the respective asset and accumulated depreciation accounts. When items are sold or retired, related gains or losses are included in net (loss) income.

Income Taxes

Deferred tax assets and liabilities are recognized for temporary differences between financial statement and income tax bases of assets and liabilities, loss carryforwards, and tax credit carryforwards, for which income tax benefits are expected to be realized in future years. A valuation allowance has been established to reduce deferred tax assets, if it is more likely than not that all, or some portion, of such deferred tax assets will not be realized. The effect on deferred taxes of a change in tax rates is recognized in the period that includes the enactment date.

The Company accounts for uncertain tax positions in accordance with accounting standards that address income taxes. The Company must recognize in its financial statements the impact of a tax position, if that position is more likely than not to be sustained on an audit, based on the technical merits of the position.

Equity Method Investments

The Company's consolidated net income (loss) will include our proportionate share, if any, of the net income or loss of our equity method investee. When the Company records its proportionate share of net income, it increases equity income (loss), net in our consolidated statements of operations and our carrying value in that investment. Conversely, when the Company records its proportionate share of a net loss, it decreases equity income (loss), net in our consolidated statements of operations and our carrying value in that investment. The Company's proportionate share of the net income or loss of our equity method investee includes significant operating and non-operating items recorded by our equity method investee. These items can have a significant impact on the amount of equity income (loss), net in our consolidated statements of operations and our carrying value in that investment. The carrying value of our equity method investment is also impacted by our proportionate share of items impacting the equity investee's accumulated other comprehensive income, if any. When the Company's carrying value in an equity method investee company has been reduced to zero, no further losses are recorded in the Company's financial statements unless the Company guaranteed obligations of the investee company or has committed additional funding. When the investee company subsequently reports income, the Company will not record its share of such income until it equals the amount of its share of losses not previously recognized.

Fair Value Measurement

The estimated fair value of certain financial instruments, including cash and short-term debt approximates their carrying value due to their short maturities and varying interest rates. "Fair value" is the price that would be received to sell an asset or transfer a liability in an orderly transaction between market participants at the measurement date. The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Based on the observability of the inputs used in the valuation methods, the Company is required to provide the following information according to the fair value accounting standards. These standards established a fair value hierarchy as specified that ranks the quality and reliability of the information used to determine fair values. Financial assets and liabilities are classified and disclosed in one of the following three categories:

Level 1:	Quoted market prices in active markets for identical assets or liabilities, which includes listed equities.
Level 2:	Observable market based inputs or unobservable inputs that are corroborated by market data. These items are typically priced using models or other valuation techniques. These models are primarily financial industry-standard models that consider various assumptions, including the time value of money, yield curves, volatility factors, as well as other relevant economic measures.
Level 3:	These use unobservable inputs that are not corroborated by market data. These values are generally estimated based upon methodologies utilizing significant inputs that are generally less observable from objective sources.

Product Revenue

Product revenue is recognized when there is persuasive evidence of an arrangement, the collection of a fixed fee is probable or determinable, and delivery of the product to the customer or distributor has occurred, at which time title generally is passed to the customer or distributor. All of these generally occur upon shipment of the product. If the product requires specific customer acceptance criteria, such as on-site customer acceptance and/or acceptance after install, then revenue is deferred until customer acceptance occurs or the acceptance provisions lapse, unless the Company can objectively and reliably demonstrate that the criteria specified in the acceptance provisions is satisfied.

MTI Instruments currently has distributor agreements in place for the international sale of general instrument and semiconductor products in certain global regions. Such agreements grant a distributor the right of first refusal to act as distributor for such products in the distributor’s territory. In return, the distributor agrees to not market other products which are considered by MTI Instruments to be in direct competition with MTI Instruments’ products. The distributor is allowed to purchase MTI Instruments’ equipment at a price which is discounted off the published domestic/international list prices. Such list prices can be adjusted by MTI Instruments during the term of the distributor agreement. Generally, payment terms with the distributor are standard net 30 days; however, on occasion, extended payment terms have been granted. Title and risk of loss of the product passes to the distributor upon delivery to the independent carrier (standard “free-on-board” factory), and the distributor is responsible for any required training and/or service with the end-user. The sale (and subsequent payment) between MTI Instruments and the distributor is not contingent upon the successful resale of the product by the distributor. Distributor sales are covered by MTI Instruments’ standard one-year warranty and there are no special return policies for distributors.

Cost of Product Revenue

Cost of product revenue includes material, labor, overhead and shipping and handling costs.

Deferred Revenue

Deferred revenue consists of billings to customers in advance of services performed, completed installation or customer acceptance. As of December 31, 2017 and 2016, the Company had no deferred revenue.

Warranty

The Company accrues a warranty liability at the time product revenue is recorded based on historical experience. The liability is reviewed during the year and is adjusted, if appropriate, to reflect new product offerings or changes in experience. Actual warranty claims are tracked by product line. Warranty liability was $14 thousand and $14 thousand at December 31, 2017 and 2016, respectively. Warranty expense was $13 thousand and $5 thousand for 2017 and 2016, respectively.

Long-Lived Assets

The Company accounts for impairment or disposal of long-lived assets in accordance with accounting standards that address the financial accounting and reporting for the impairment or disposal of long-lived assets, specify how impairment will be measured, and how impaired assets will be classified in the consolidated financial statements. On a quarterly basis, the Company analyzes the status of its long-lived assets at each subsidiary for potential impairment. As of December 31, 2017, the Company does not believe that any of its long-lived assets have suffered any type of impairment that would require an adjustment to that asset's recorded value.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid short-term investments with original maturities of less than three months.

Net Income (Loss) per Share

The Company computes basic income (loss) per common share by dividing net income (loss) by the weighted average number of common shares outstanding during the reporting period. Diluted income (loss) per share reflects the potential dilution, if any, computed by dividing income (loss) by the combination of dilutive common share equivalents, comprised of shares issuable under outstanding investment rights, warrants and the Company's share-based compensation plans, and the weighted average number of common shares outstanding during the reporting period. Dilutive common share equivalents include the dilutive effect of in-the-money stock options, which are calculated based on the average share price for each period using the treasury stock method. Under the treasury stock method, the exercise price of a stock option, the amount of compensation cost, if any, for future service that the Company has not yet recognized, and the amount of windfall tax benefits that would be recorded in additional paid-in capital for the periods presented prior to the adoption of accounting standard update 2016-09 on January 1, 2017, if any, when the stock option is exercised are assumed to be used to repurchase shares in the current period.

Share-Based Payments

The Company accounts for stock based awards exchanged for employee service in accordance with the share-based payment accounting guidance. Stock-based compensation represents the cost related to stock-based awards granted to employees and directors. The Company measures stock-based compensation cost at grant date based on the estimated fair value of the award, and recognizes the cost as expense on a straight-line basis in accordance with the vesting of the options (net of estimated forfeitures) over the option's requisite service period. The Company estimates the fair value of stock-based awards using a Black Scholes valuation model. Stock-based compensation expense is recorded in the lines titled "Cost of product revenue," "Selling, general and administrative expenses" and "Research and product development expenses" in the Consolidated Statements of Operations based on the employees' respective functions.

The Company records deferred tax assets for awards that potentially can result in deductions on the Company's income tax returns based on the amount of compensation cost that would be recognized upon issuance of the award and the Company's statutory tax rate. Differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the Company's income tax return are recorded in Additional Paid-In Capital (if the tax deduction exceeds the deferred tax asset) or in the Consolidated Statement of Operations (if the deferred tax asset exceeds the tax deduction and no historical pool of windfall tax benefits exists). Since the adoption of the revised accounting standard on share-based payments, no tax benefits have been recognized related to share-based compensation since the Company has established a full valuation allowance to offset all potential tax benefits associated with these deferred tax assets.

Concentration of Credit Risk

Financial instruments that subject the Company to concentrations of credit risk principally consist of cash equivalents and trade accounts receivable. The Company's trade accounts receivable are primarily from sales to commercial customers, the U.S. government and state agencies. The Company does not require collateral and has not historically experienced significant credit losses related to receivables from individual customers or groups of customers in any particular industry or geographic area. In 2017 and 2016, approximately 40.5% and 32.3%, respectively, of our product revenues was from customers outside of the United States.

The Company has cash deposits in excess of federally insured limits, but does not believe them to be at risk.

Research and Development Costs

The Company expenses research and development costs as incurred. The Company incurred research and development costs of approximately $1.1 million and $1.2 million, which was entirely related to MTI Instruments, for the years ended December 31, 2017 and 2016, respectively.

Advertising Costs

The Company expenses advertising costs as incurred. The Company incurred advertising costs of approximately $37 and $22 thousand, which was entirely related to MTI Instruments, for the years ended December 31, 2017 and 2016, respectively.

Other Comprehensive Income

The Company had no other comprehensive income (loss) items for the years ended December 31, 2017 and 2016.

Effect of Recent Accounting Standards or Updates Not Yet Effective

Changes to U.S. GAAP are established by the Financial Accounting Standards Board (the FASB) in the form of accounting standard updates (ASUs) to the FASB's Accounting Standards Codification (ASC). The Company considered the applicability and impact of all ASUs. ASUs not mentioned below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial position or results of operations.

In May 2014, the FASB issued ASU 2014-09 (Revenue from Contracts with Customers (Topic 606)) and issued subsequent amendments to the initial guidance in August 2015, March 2016, April 2016, May 2016 and December 2016 within ASU 2015-14, ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20, respectively (collectively, Topic 606) to clarify the principles for recognizing revenue and to develop a common revenue standard for U.S. GAAP and International Financial Reporting Standards. Topic 606 supersedes nearly all existing revenue recognition guidance under U.S. GAAP. Topic 606 is principles-based and provides a five-step model to determine when and how revenue is recognized. It is possible more judgment and estimates may be required within the revenue recognition process than are required under existing U.S. GAAP. The core principle is that a company should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. To achieve that core principle, an entity should apply the following steps: Step 1: Identify the contract(s) with a customer. Step 2: Identify the performance obligations in the contract. Step 3: Determine the transaction price. Step 4: Allocate the transaction price to the performance obligations in the contract. Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation. Topic 606 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. This standard, as amended, will be effective for the Company for annual and interim reporting periods beginning after December 15, 2017. The Company will adopt this standard in fiscal 2018. There will not be a material impact on our consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01 (Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities) the main objective of which is to enhance the reporting model for financial instruments to provide users of financial statements with more decision-useful information and address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This standard will be effective for the Company for annual and interim reporting periods beginning on or after December 15, 2017. The Company will adopt this standard in fiscal 2018. There will not be a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02 (Leases (Topic 842)), which requires lessees to recognize a right-of-use asset and a lease liability on their balance sheet for virtually all of their leases (other than leases that meet the definition of a short-term lease). The lease liability will be equal to the present value of lease payments and the right-of-use asset will be based on the lease liability, subject to adjustment such as for initial direct costs. For income statement purposes, this standard retains a dual model similar to ASC 840, requiring leases to be classified as either operating or finance. For lessees, operating leases will result in straight-line expense (similar to current accounting by lessees for operating leases under ASC 840) while finance leases will result in a front-loaded expense pattern (similar to current accounting by lessees for capital leases under ASC 840). While this standard maintains similar accounting for lessors as under ASC 840, this standard reflects updates to, among other things, align with certain changes to the lessee model. This standard will be effective for the Company for annual and interim reporting periods beginning on or after December 15, 2018, and early adoption is permitted. Although we have not completed our assessment, we believe adoption of this standard may have a significant impact on our consolidated balance sheets. However, we do not expect the adoption to change the recognition, measurement or presentation of lease expense within our consolidated statements of operations or the consolidated statements of cash flows. We currently expect that most of our operating lease commitments will be subject to the new standard and recognized as operating lease liabilities and right-of-use assets upon our adoption of the standard, which will increase our total assets and total liabilities that we report relative to such amounts prior to adoption. Information about our undiscounted future lease payments and the timing of those payments is in Note 12, Commitments and Contingencies.

In August 2016, the FASB issued ASU 2016-15 (Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments), which clarifies the treatment of several cash flow categories. In addition, ASU 2016-15 clarifies that when cash receipts and cash payments have aspects of more than one class of cash flows and cannot be separated, classification will depend on the predominant source or use. This standard will be effective for the Company for annual and interim reporting periods beginning after December 15, 2017. The Company will adopt this standard in fiscal 2018 using a retrospective transition method to each period presented. There will not be a material impact on our consolidated financial statements.

In May 2017, the FASB issued ASU 2017-09 (Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting), which provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. This standard will be effective for the Company for annual and interim reporting periods beginning after December 15, 2017. The Company will adopt this standard in fiscal 2018 prospectively to an award modified on or after the adoption date. There will not be a material impact on our consolidated financial statements.

Recently Adopted Accounting Standards

On January 1, 2017, we adopted ASU 2015-11 (Inventory (Topic 330): Simplifying the Measurement of Inventory), which applies to inventory that is measured using first-in, first-out (FIFO) or average cost. As required by ASU 2015-11, we measure inventory that is within scope at the lower of cost and net realizable value, which is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Subsequent measurement was unchanged for inventory that is measured using last-in, last-out (LIFO). The Company adopted this standard on a prospective basis. The adoption of this standard did not have a material impact on its consolidated financial statements.

On January 1, 2017, we adopted ASU 2015-17 (Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes). The amendments in this standard require entities that present a classified balance sheet to classify all deferred tax liabilities and assets as a noncurrent amount. The requirement that deferred tax liabilities and assets of a tax-paying component of an entity be offset and presented as a single amount was not affected by the amendments in this standard. Additionally, the amendments in this standard align the deferred income tax presentation with the requirements in International Accounting Standards (IAS) 1 (Presentation of Financial Statements). The Company adopted this standard on a prospective basis. The adoption of this standard did not have a material impact on the Company's consolidated financial statements as its deferred tax assets and liabilities are currently in a full valuation allowance. Prior periods were not retrospectively adjusted.

On January 1, 2017, we adopted ASU 2016-09 (Compensation–Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting). As required by ASU 2016-09, all income tax effects of awards, including excess tax benefits, recognized on stock-based compensation expense are reflected in the consolidated statements of operations as a component of the provision for income taxes on a prospective basis. As required by ASU 2016-09, all tax related cash flows recognized on stock-based compensation expense are classified as an operating activity in our consolidated statements of cash flows on a prospective basis. Accordingly, prior periods have not been adjusted. Additionally, ASU 2016-09 allows companies to make a policy election to account for forfeitures either upon occurrence or by estimating forfeitures. We have elected to continue estimating forfeitures expected to occur in order to determine the amount of compensation cost to be recognized each period. See Note 6 for additional information.

On January 1, 2017, we adopted ASU 2017-03 (Accounting Changes and Error Corrections (Topic 250) and Investments – Equity Method and Joint Ventures (Topic 323); Amendments to SEC Paragraphs Pursuant to Staff Announcements at the September 22, 2016 and November 17, 2016 Emerging Issues Task Force (EITF) Meetings (SEC Update)), which amends certain topics of the ASC as defined in this ASU and also adds an SEC paragraph and amends other topics pursuant to an SEC Staff Announcement made at the September 22, 2016 EITF meeting. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

3. Accounts Receivable

Accounts receivables consist of the following at December 31:

(dollars in thousands)	**2017**		**2016**	
U.S. and State Government	$	221	$	103
Commercial		1,187		778
Allowance for doubtful accounts		(2)		—
Total	$	1,406	$	881

4. Inventories

Inventories consist of the following at December 31:

(dollars in thousands)	2017	2016
Finished goods	$ 214	$ 244
Work in process	174	143
Raw materials	306	289
Total	$ 694	$ 676

5. Property, Plant and Equipment

Property, plant and equipment consist of the following at December 31:

(dollars in thousands)

	2017	2016
Leasehold improvements	$ 39	$ 39
Computers and related software	971	1,068
Machinery and equipment	881	892
Office furniture and fixtures	34	25
	1,925	2,024
Less: Accumulated depreciation	1,741	1,864
	$ 184	$ 160

Depreciation expense was $81 thousand and $85 thousand for 2017 and 2016, respectively. Repairs and maintenance expense was $13 thousand and $14 thousand for 2017 and 2016, respectively.

6. Income Taxes

The 2017 Tax Act was signed into law on December 22, 2017 and significantly revises the U.S. corporate income tax regime by, among other things, lowering the statutory corporate tax rate from 35% to 21%, eliminating certain deductions, imposing a mandatory one-time tax on accumulated earnings of foreign subsidiaries, introducing new tax regimes and changing how foreign earnings are subject to U.S. tax. The 2017 Tax Act also enhanced and extended through 2026 the option to claim accelerated depreciation deductions on qualified property. The Company completed its determination of the accounting implications of the 2017 Tax Act on its tax accruals and reasonably estimated the effects of the 2017 Tax Act and recorded provisional amounts in its financial statements as of December 31, 2017. The Company recorded a $7.2 million adjustment with a corresponding full valuation allowance adjustment to our net deferred tax liabilities for the impact of the 2017 Tax Act. This amount is comprised of the remeasurement of federal net deferred tax liabilities resulting from the permanent reduction in the U.S. statutory corporate tax rate to 21% from 35%. As the Company interprets any additional guidance issued by the U.S. Treasury Department, the IRS, and other standard-setting bodies, the Company may make adjustments to the provisional amounts. Those adjustments may materially impact our provision for income taxes in the period in which the adjustments are made.

The Company adopted the provisions of accounting standard update (ASU) 2016-09 as of the beginning of the current fiscal year, which required recognition through opening retained earnings of any pre-adoption date net operating loss (NOL) carryforwards from nonqualified stock options for excess tax benefits that were not previously recognized because the related tax deduction had not reduced taxes payable and other employee share-based payments, as well as recognition of all income tax effects from share-based payments arising on or after January 1, 2017 (our adoption date) in income tax expense. As a result, the Company recognized through opening retained earnings $1.3 million of pre-adoption date NOL carryforwards with remaining carryforward periods of more than 10 years (the corresponding deferred tax asset is $457 thousand). The Company recorded a full valuation allowance for this deferred tax asset. In addition, the Company realized windfall tax benefits of less than $1 thousand during the three months ended December 31, 2017 and September 30, 2017, shortfall tax expense of $19 thousand during the three months ended June 30, 2017 and windfall tax benefits of $2 thousand during the three months ended March 31, 2017, which the Company recognized as discrete period income benefits and tax, accordingly, as required by the ASU.

Income tax benefit (expense) for each of the years ended December 31 consists of the following:

(dollars in thousands)

	2017	**2016**
Federal	$ —	$ 10
State	(6)	(1)
Deferred	—	—
Total	$ (6)	$ 9

The significant components of deferred income tax (expense) benefit from operations for each of the years ended December 31 consists of the following:

(dollars in thousands)

	2017	2016
Deferred tax (expense) benefit	$ (380)	$ 240
Net operating loss carry forward	(6,550)	(120)
Valuation allowance	6,930	(120)
	$ —	$ —

The Company’s effective income tax rate from operations differed from the Federal statutory rate for each of the years ended December 31 as follows:

	2017	2016
Federal statutory tax rate	34 %	(34) %
Change in valuation allowance	(1,179)	33
Change in tax rate	1,221	—
Expiration of stock option	4	2
Prior year tax adjustments and other	(2)	(4)
Stock option windfall benefit	(78)	—
Other, net	1	1
Tax rate	1 %	(2) %

Pre-tax income (loss) was $588 thousand and $(368) thousand for 2017 and 2016, respectively.

Deferred Tax Assets:

Deferred tax assets are determined based on the temporary differences between the financial statement and tax bases of assets and liabilities as measured by the enacted tax rates. Temporary differences, net operating loss carryforwards and tax credit carryforwards that give rise to deferred tax assets and liabilities are summarized as follows as of December 31:

(dollars in thousands)		**2017**		**2016**
Deferred tax assets:				
Inventory valuation	$	61	$	225
Inventory capitalization		1		2
Vacation pay		18		29
Warranty and other sale obligations		3		5
Allowance for related party note receivable		60		95
Other reserves and accruals		—		24
Net operating loss		10,914		17,464
Property, plant and equipment		(17)		(17)
Stock options		126		269
Research and development tax credit		450		450
Alternative minimum tax credit		54		54
		11,670		18,600
Valuation allowance		(11,670)		(18,600)
Net deferred tax assets	$	—	$	—

As of December 31, 2017, the Company has approximately $450 thousand of research and development tax credit carry forwards, which begin to expire in 2018, and approximately $54 thousand of alternative minimum tax credit carry forwards, which have no expiration date.

Valuation Allowance:

The Company provides for recognition of deferred tax assets if the realization of such assets is more likely than not to occur in accordance with accounting standards that address income taxes. Significant management judgment is required in determining the period in which the reversal of a valuation allowance should occur. The Company has considered all available evidence, both positive and negative, such as historical levels of income and future forecasts of taxable income amongst other items, in determining its valuation allowance. In addition, the Company's assessment requires us to schedule future taxable income in accordance with accounting standards that address income taxes to assess the appropriateness of a valuation allowance which further requires the exercise of significant management judgment.

The Company has recorded a full valuation allowance at December 31, 2017 and December 31, 2016 for its deferred tax assets. We will continue to evaluate the ability to realize our deferred tax assets and related valuation allowance on a quarterly basis.

The valuation allowance at December 31, 2017 and 2016 was $11.7 million and $18.6 million, respectively. Activity in the valuation allowance for deferred tax assets is as follows as of December 31:

(dollars in thousands)	**2017**	**2016**
Valuation allowance, beginning of year	$ 18,600	$ 18,480
Change in federal tax rate	(7,170)	—
Allowance for accounts receivable	—	—
Allowance for related party note receivable	4	(16)
Inventory	(124)	128
Net operating income (loss)	2	(120)
Property, plant and equipment	(13)	(20)
Stock options	395	149
Other reserves and accruals	(24)	(1)
Valuation allowance, end of year	$ 11,670	$ 18,600

Net operating losses:

At December 31, 2017, the Company has unused Federal net operating loss carryforwards of approximately $52.0 million. Of these, approximately $737 thousand will expire in 2020, with the remainder expiring through 2037.

The Company's and/or its subsidiaries' ability to utilize their net operating loss carryforwards may be significantly limited by Section 382 of the IRC of 1986, as amended, if the Company or any of its subsidiaries undergoes an "ownership change" as a result of changes in the ownership of the Company's or its subsidiaries' outstanding stock pursuant to the exercise of the warrants or otherwise.

Unrecognized tax benefits:

The unrecognized tax benefits in accordance with accounting standards that address income taxes at December 31, 2017 and 2016 was $1.2 million. These unrecognized tax benefits relate to former subsidiaries of the Company and a prior investment in a partnership.

In future periods, if $1.2 million of these unrecognized benefits become supportable, the Company may not recognize a change in its effective tax rate as long as it remains in a partial valuation allowance position. Additionally, the Company does not have uncertain tax positions that it expects will increase or decrease within twelve months of this reporting date. The Company recognizes interest and penalties related to uncertain tax positions as a component of tax expense. The Company did not recognize any interest or penalties in 2017 and 2016.

The Company files income tax returns, including returns for its subsidiaries, with federal and state jurisdictions. The Company is no longer subject to IRS or NYS examinations for its federal and state returns for any periods prior to 2014, although carryforward attributes that were generated prior to 2014 may still be adjusted upon examination by the IRS if they either have been or will be used in a future period.

7. Accrued Liabilities

Accrued liabilities consist of the following at December 31:

(dollars in thousands)	2017	2016
Salaries, wages and related expenses	$ 288	$ 223
Liability to shareholders for previous acquisition	363	363
Legal and professional fees	111	128
Warranty and other sale obligations	14	14
Commissions	44	27
Other	93	151
	$ 913	$ 906

8. Stockholders' Equity

Common Stock

The Company has one class of common stock, par value $.01. Each share of the Company's common stock is entitled to one vote on all matters submitted to stockholders. As of December 31, 2017 and 2016 there were 9,363,482 and 9,010,643 shares of common stock issued and outstanding, respectively.

Reservation of Shares

The Company has reserved common shares for future issuance as follows as of December 31, 2017:

Stock options outstanding	766,339
Common stock available for future equity awards or issuance of options	68,661
Number of common shares reserved	835,000

9. Retirement Plan

The Company maintains a voluntary savings and retirement plan under IRC Section 401(k) covering substantially all employees. Employees must complete six months of service and have attained the age of twenty-one prior to becoming eligible for participation in the plan. The Company plan allows eligible employees to contribute a percentage of their compensation on a pre-tax basis and the Company matches employee contributions, on a discretionary basis, currently in an amount equal to 100% of the first 3% and 50% of the next 2% of the employee's salary, subject to annual tax deduction limitations. Effective January 1, 2017, Company matching contributions are vested immediately. Company matching contributions were $83 thousand and $97 thousand for 2017 and 2016, respectively. The Company may also make additional discretionary contributions in amounts as determined by management and the Board of Directors. There were no additional discretionary contributions by the Company for the years 2017 or 2016.

10. Income (Loss) per Share

The following table sets forth the reconciliation of the numerators and denominators of the basic and diluted per share computations for continuing operations for the years ended December 31:

(dollars in thousands, except shares)		**2017**		**2016**
<u>Numerator:</u>				
Net income (loss)	$	582	$	(359)
<u>Denominator:</u>				
Basic EPS:				
Common shares outstanding, beginning of period		9,010,643		5,258,883
Weighted average common shares issued during the period		118,535		729,662
Denominator for basic earnings per common shares — Weighted average common shares		9,129,178		5,988,545
Diluted EPS:				
Common shares outstanding, beginning of period		9,010,643		5,258,883
Common stock equivalents – options		203,498		—
Weighted average common shares issued during the period		118,535		729,662
Denominator for diluted earnings per common shares - Weighted average common shares		9,332,676		5,988,545

Not included in the computation of earnings per share, assuming dilution, for the year ended December 31, 2017, were options to purchase 271,589 shares of the Company’s common stock. These potentially dilutive items were excluded even though the average market price of the common stock exceeded the exercise prices for a portion of the options because the calculation of incremental shares resulted in an anti-dilutive effect.

Not included in the computation of earnings per share-assuming dilution for the year ended December 31, 2016 were options to purchase 1,142,339 shares of the Company’s common stock. These potentially dilutive items were excluded because the Company incurred a loss during the periods and their inclusion would be anti-dilutive.

11. Stock Based Compensation

Stock-based incentive awards are provided to employees and directors under the terms of the Company’s 2006 Equity Incentive Plan (2006 Plan), which was amended and restated effective June 30, 2011, September 16, 2009 and October 20, 2016, 2012 Equity Incentive Plan (the 2012 Plan), which was amended and restated as of October 20, 2016, and 2014 Equity Incentive Plan (the 2014 Plan) (collectively, the Plans). Awards under the Plans have generally included at-the-money options and restricted stock grants.

Stock options are awards which allow holders to purchase shares of the Company’s common stock at a fixed price. Stock options issued to employees and non-employee members of the MTI Board of Directors generally vest at a rate of 25% on each of the first four anniversaries of the date of the award. Certain options granted may be fully or partially exercisable immediately, may vest on other than a four year schedule or vest upon attainment of specific performance criteria. Restricted stock awards generally vest one year after the date of grant; however, certain awards may vest immediately or vest upon attainment of specific performance criteria. Option exercise prices are generally equivalent to the closing market price of the Company’s common stock on the date of grant. Unexercised options generally terminate either seven or ten years after date of grant.

The 2006 Plan was adopted by the Company's Board of Directors on March 16, 2006 and approved by stockholders on May 18, 2006. The 2006 Plan was amended and restated by the Board of Directors effective September 16, 2009, June 30, 2011 and October 20, 2016. The September 16, 2009 amendment increased the initial aggregate number of 250,000 shares of common stock that may be awarded or issued to 600,000, the June 30, 2011 amendment increased the aggregate number of shares of common stock that may be awarded or issued under the 2006 Plan to 1,200,000, and the October 2016 amendment allowed for the award agreement or another agreement entered into between the Company and the award grantee to vary the method of exercise of options issued under the 2006 Plan and the provisions governing expiration of options or other awards under the 2006 Plan following termination of the award recipient. The number of shares that may be awarded under the 2006 Plan and awards outstanding has been adjusted for stock splits and other similar events. Under the 2006 Plan, the Board of Directors is authorized to issue stock options, stock appreciation rights, restricted stock, and other stock-based incentives to officers, employees and others. In connection with seeking stockholder approval of the 2012 Plan, the Company agreed not to make further awards under the 2006 Plan.

The 2012 Plan was adopted by the Company's Board of Directors on April 14, 2012 and approved by its stockholders on June 14, 2012. The 2012 Plan was amended and restated by the Board of Directors effective October 20, 2016. The October 2016 amendment allowed for the award agreement or another agreement entered into between the Company and the award grantee to vary the method of exercise of options issued under the 2012 Plan and an agreement entered into between the Company and the award grantee to vary the provisions governing expiration of options or other awards under the 2012 Plan following termination of the award recipient. The 2012 Plan provides an initial aggregate number of 600,000 shares of common stock that may be awarded or issued. The number of shares that may be awarded under the 2012 Plan and awards outstanding may be subject to adjustment on account of any recapitalization, reclassification, stock split, reverse stock split and other dilutive changes in our common stock. Under the 2012 Plan, the Board of Directors is authorized to issue stock options (incentive and nonqualified), stock appreciation rights, restricted stock, restricted stock units and other stock-based awards to employees, officers, directors, consultants and advisors of the Company and its subsidiaries. Incentive stock options may only be granted to employees of the Company and its subsidiaries.

The 2014 Plan was adopted by the Company's Board of Directors on March 12, 2014 and approved by its stockholders on June 11, 2014. The 2014 Plan provides an initial aggregate number of 500,000 shares of common stock that may be awarded or issued. The number of shares that may be awarded under the 2014 Plan and awards outstanding may be subject to adjustment on account of any stock dividend, spin-off, stock split, reverse stock split, split-up, recapitalization, reclassification, reorganization, combination or exchange of shares, merger, consolidation, liquidation, business combination, exchange of shares or the like. Under the 2014 Plan, the Board-appointed administrator of the 2014 Plan is authorized to issue stock options (incentive and nonqualified), stock appreciation rights, restricted stock, restricted stock units, phantom stock, performance awards and other stock-based awards to employees, officers and directors of, and other individuals providing bona fide services to or for, the Company or any affiliate of the Company. Incentive stock options may only be granted to employees of the Company and its subsidiaries.

In connection with the sale of shares of common stock to Brookstone, the Company entered into an Option Exercise and Stock Transfer Restriction Agreement (collectively, the Option and Transfer Agreements) with its Chief Executive Officer, its Chief Financial Officer and each of its non-employee directors (collectively, the Insiders). The Option and Transfer Agreements amend the stock option grant agreements between the Company and each Insider with respect to an option granted under, and modify the terms of any option to purchase Common Stock held by each such Insider (collectively, Options) granted under, the Plans. The Option and Transfer Agreements restrict the aggregate amount of shares of Common Stock for which the Insiders may exercise Options during calendar years 2016, 2017, 2018 and 2019, and provide for a modified procedure for exercising Options in order to ensure the limit on the aggregate amount of Options that may be exercised in any such year is not exceeded. Such amendments and modifications also operate to, except with respect to the termination of Options in connection with an Insider's termination of employment or service in connection with misconduct as described in the Option and Transfer Agreements, (i) remove all references to an expiration of the exercisability of such Options within a special, delineated time period following the termination of service to or employment by the Company, and (ii) provide that all vested Options are exercisable by the Insider until default expiration under the applicable Plan (i.e., ten years from the date of grant). If an Option and Transfer Agreement is terminated, the limitations on Option exercises described above will terminate, but the exercisability of the Insider's vested Options until default expiration under the applicable Plan and stock option agreement (i.e., ten years from the date of grant) will survive indefinitely.

No options were granted during 2017.

During 2016, the Company granted options to purchase 261,000 shares of the Company's common stock from the 2014 Plan, which generally vest 25% on each of the first four anniversaries of the date of the award. The exercise price of these options is $0.78 per share and was based on the closing market price of the Company's common stock on the date of grant. Using a Black-Scholes Option Pricing Model, the weighted average fair value of these options is $0.74 per share and was estimated at the date of grant.

During 2016, the Company granted options to purchase 2,000 shares of the Company's common stock from the 2012 Plan, which generally vest 25% on each of the first four anniversaries of the date of the award. The exercise price of these options is $0.78 per share and was based on the closing market price of the Company's common stock on the date of grant. Using a Black-Scholes Option Pricing Model, the weighted average fair value of these options is $0.74 per share and was estimated at the date of grant.

Stock-based compensation expense for the years ended December 31, 2017 and 2016 was generated from stock option awards. Stock options are awards that allow holders to purchase shares of the Company's common stock at a fixed price. Under the 2014 and 2012 Plans, stock options issued to employees generally vest 25% over four years. Options issued to non-employee members of the MTI Board of Directors generally vest 25% over four years. Certain options granted may be fully or partially exercisable immediately, may vest on other than a four year schedule or vest upon attainment of specific performance criteria. Restricted stock awards generally vest one year after the date of grant, although certain awards may vest immediately or vest upon attainment of specific performance criteria. Option exercise prices are generally equivalent to the closing market value price of the Company's common stock on the date of grant. Unexercised options generally terminate ten years after date of grant.

The Company estimates the fair value of stock options using a Black-Scholes valuation model. Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility of the Company's stock, an appropriate risk-free rate, and the Company's dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the Company. The Company's estimate of an expected option term was calculated in accordance with the simplified method for calculating the expected term assumption.

The following table presents the weighted-average assumptions used for options granted under the 2014 Plan:

		2016
Option term (years)		5.05
Volatility		171.91%
Risk-free interest rate		1.52%
Dividend yield		0%
Weighted-average fair value per option granted	$	0.74

The following table presents the weighted-average assumptions used for options granted under the 2012 Plan:

		2016
Option term (years)		5.05
Volatility		171.91%
Risk-free interest rate		1.52%
Dividend yield		0%
Weighted-average fair value per option granted	$	0.74

Share-based compensation expense recognized in the Consolidated Statements of Operations is based on awards ultimately expected to vest, therefore, awards are reduced for estimated forfeitures. The revised accounting standard requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Total share-based compensation expense, related to all of the Company's share-based awards, recognized for the years ended December 31, was comprised as follows:

(dollars in thousands, except eps)		**2017**		**2016**
Cost of product revenue	$	—	$	3
Research and product development		2		45
Selling, general and administrative		39		401
Share-based compensation expense	$	41	$	449
Impact on basic EPS	$	0.00	$	0.08
Impact on diluted EPS	$	0.00	$	0.08

Total unrecognized compensation costs related to non-vested awards as of December 31, 2017 and December 31, 2016 is $4 thousand and $49 thousand, respectively, and is expected to be recognized over a weighted-average remaining vesting period of approximately 0.48 years and 1.04 years, respectively.

Presented below is a summary of the Company's stock option plans' activity for the years ended December 31:

	2017	2016
Shares under option, beginning	1,142,339	926,565
Granted	—	263,000
Exercised	(352,839)	(12,161)
Forfeited	(10,000)	(19,436)
Expired/canceled	(13,161)	(15,629)
Shares under option, ending	766,339	1,142,339
Options exercisable	748,839	1,043,214
Remaining shares available for granting of options	68,661	45,500

The weighted average exercise price for the Plans is as follows for each of the years ended December 31:

	2017	2016
Shares under option, beginning	$ 0.76	$ 0.77
Granted	—	$ 0.78
Exercised	$ 0.61	$ 0.57
Forfeited	$ 0.75	$ 0.89
Expired/canceled	$ 1.08	$ 1.69
Shares under option, ending	$ 0.82	$ 0.76
Options exercisable, ending	$ 0.82	$ 0.75

The following table summarizes information for options outstanding and exercisable for the Plans as of December 31, 2017:

	Outstanding Options			Options Exercisable	
Exercise Price Range	Number	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number	Weighted Average Exercise Price
$0.29 - $1.15	618,839	5.95	$ 0.73	601,339	$ 0.72
$1.16 - $1.40	147,500	6.62	$ 1.22	147,500	$ 1.22
	766,339	6.08	$ 0.82	748,839	$ 0.82

The aggregate intrinsic value (i.e. the difference between the closing stock price and the price to be paid by the option holder to exercise the option) is $183 thousand for the Company's outstanding options and $183 thousand for the exercisable options as of December 31, 2017. The amounts are based on the Company's closing stock price of $1.01 as of December 31, 2017.

There were no unvested restricted stock grants for the year ended December 31, 2017 and 2016.

Non-vested options activity is as follows for the year ended December 31:

	2017 Options	**2017 Weighted Average Exercise Price**
Non-vested options balance, beginning January 1	99,125	$0.92
Non-vested options granted	—	—
Vested options	(71,625)	$0.91
Non-vested options forfeited	(10,000)	$0.75
Non-vested options balance, ending December 31	17,500	$1.05

12. Commitments and Contingencies

Contingencies:

Legal

We are subject to legal proceedings, claims and liabilities which arise in the ordinary course of business. When applicable, we accrue for losses associated with legal claims when such losses are probable and can be reasonably estimated. These accruals are adjusted as additional information becomes available or circumstances change. Legal fees are charged to expense as they are incurred.

Commitments:

Leases

The Company and its subsidiary lease certain manufacturing, laboratory and office facilities. The lease provides for the Company to pay its allocated share of insurance, taxes, maintenance and other costs of the leased property.

Future minimum rental payments required under non-cancelable operating leases (with initial or remaining lease terms in excess of one year) as of December 31, 2017 are: $224 thousand in 2018; $209 thousand in 2019 and $3 thousand in 2020. As of December 31, 2017 and December 31, 2016, rent expense under all leases was $225 thousand and $231 thousand, respectively.

Employment Agreement

On May 5, 2017, the Company entered into an employment agreement with one employee. The agreement provides for an initial term ending December 31, 2018, and, unless either party provides written notice that the agreement will not be renewed, is renewed for an additional year on December 31, 2018 and each subsequent December 31; such non-renewal may be for any or for no stated reason. The agreement provides for certain payments upon termination of employment under certain circumstances. As of December 31, 2017, the Company’s potential minimum obligation to this employee was approximately $198 thousand.

13. Related Party Transactions

MeOH Power, Inc.

The Company records its investment in MeOH Power, Inc. using the equity method of accounting. The fair value of the Company’s interest in MeOH Power, Inc. has been determined to be $0 as of December 31, 2017 and December 31, 2016, based on MeOH Power, Inc.’s net position and expected cash flows. As of December 31, 2017, the Company retained its ownership of approximately 47.5% of MeOH Power, Inc.’s outstanding common stock, or 75,049,937 shares. The number of shares of MeOH Power, Inc.’s common stock authorized for issuance is 240,000,000 as of December 31, 2017. The Company previously held warrants to purchase 31,904,136 shares of common stock of MeOH Power, Inc., which expired in December 2016.

On December 18, 2013, MeOH Power, Inc. and the Company executed a Senior Demand Promissory Note (the Note) in the amount of $380 thousand to secure the intercompany amounts due to the Company from MeOH Power, Inc. upon the deconsolidation of MeOH Power, Inc. Interest accrues on the Note at the Prime Rate in effect on the first business day of the month, as published in the Wall Street Journal. At the Company’s option, all or part of the principal and interest due on this Note may be converted to shares of common stock of MeOH Power, Inc. at a rate of $0.07 per share. Interest began accruing on January 1, 2014. At December 31, 2013, the Company recorded a full allowance against the Note. In 2014, $115 thousand was received from MeOH Power, Inc. in principle and interest and an additional $20 thousand was released from the allowance in advance of a January 2015 payment from MeOH Power, Inc. As of December 31, 2017 and December 31, 2016, $285 thousand and $275 thousand, respectively, of principal and interest are available to convert into shares of common stock of MeOH Power, Inc. Any adjustments to the allowance are recorded as miscellaneous expense during the period incurred.

Legal Services

During the years ended December 31, 2017 and December 31, 2016, the Company incurred $10 thousand and $80 thousand, respectively, to Couch White, LLP for legal services associated with contract review. A partner at Couch White, LLP is an immediate family member of one of our Directors.

14. Geographic and Segment Information

The Company sells its products on a worldwide basis with its principal markets listed in the table below where information on product revenue is summarized by geographic area for the Company as a whole for each of the years ended December 31:

(dollars in thousands)	**2017**	**2016**
Product revenue:		
United States	$ 4,200	$ 4,774
Association of South East Asian Nations (ASEAN)	1,710	1,368
Europe, the Middle East and Africa (EMEA)	1,024	659
North America	123	205
South America	4	50
Total product revenue	$ 7,061	$ 7,056

Revenues are attributed to regions based on the location of customers. In 2017 and 2016, approximately 40.5% and 32.3%, respectively, of our product revenues was from customers outside of the United States.

Long-lived assets of $184 thousand and $160 thousand at December 31, 2017 and 2016, respectively consist of property, plant and equipment all located within the United States.

At MTI Instruments, the largest commercial customer in 2017 was a manufacturer of semiconductor equipment in Asia, which accounted for 10.0% of total product revenue. In 2016, the largest commercial customer was an Asian distributor of our general instrumentation products, who accounted for 8.1% of total product revenue. The U.S. Air Force continues to be the largest government customer, accounting for 20.1% and 18.1% of total product revenue in 2017 and 2016, respectively.

The Company operates in one segment and therefore segment information is not presented.

15. Debt

During the first quarter of 2016, we entered into discussions with Bank of America, N.A. (the Bank) to strengthen the Company's then-existing lines of credit and re-align their terms to be more consistent with our current business plan. During such discussions, the Bank informed the Company that based on its results for 2015 it was not in compliance with certain financial covenants of the lines. Since an agreement on new covenants could not be reached, the Company decided that the lines of credit could not be utilized and therefore terminated them on March 24, 2016. There were no amounts outstanding under the credit facilities at the time of cancellation.

16. Subsequent Events

On March 19, 2018, the Company filed a Form 15 with the Securities and Exchange Commission ("SEC") terminating the registration of MTI's common stock, par value $0.01 per share (the "Common Stock"), thereby suspending its obligations to file periodic and current reports and other filings with the SEC, including annual reports on Form 10-K and quarterly reports on Form 10-Q for years beginning after December 31, 2017. The deregistration of the Common Stock is expected to result in significant cost savings to MTI in the near term from the elimination of complying with SEC reporting requirements. Also, the deregistration of the Common Stock will allow the Company to avoid the substantial additional costs associated with the compliance and auditing requirements of the Securities Exchange Act of 1934, as amended, and to focus its resources on increasing long-term growth. Although it will not be required to do so, following deregistration MTI plans to continue to provide stockholders with annual audited financial statements and quarterly unaudited financial statements through the OTC Markets Group website.