

2022 ANNUAL REPORT

SENSING
SOLUTIONS THAT
ARE POWERING
THE FUTURE



Vishay Precision Group, Inc. (VPG)

From the Chairman of the Board

Dear Stockholders:

I am honored to be VPG's new Chairman of the Board, and to pick up the mantle from Marc Zandman, who will continue on as a member of our board. I want to thank Marc for his vision, insight and leadership during his tenure as Chairman.

VPG reported a record year in 2022. In addition to our strong financial performance, we continued to deploy our capital to support our growth strategies and objectives and create long-term value for you, our stockholders. Our balanced capital allocation strategy is supporting investments to promote our organic growth, add high quality businesses to our platform, and repurchase our shares.

Also during the year we continued to make progress with our corporate Environmental, Social and Governance ("ESG") program, which we launched in the fourth quarter of 2021. Our multi-year ESG plan is built on four pillars: Our People, Our Environment, Our Governance and Our Products. In 2022, we completed a materiality assessment, developed a multi-year ESG plan, and established an internal scorecard with short and long-term objectives. Beyond our formal ESG initiative, we take great pride in how VPG's products play a role in sustainability by making the world safer, smarter, and more productive.

We are focused on accelerating our long-term growth and value creation. Our new diversified operational structure, which we adopted in the fourth quarter of 2021, provides flexibility and accountability to VPG's businesses. We can leverage our core technologies, competitive position, and deep technical expertise in growing applications that increasingly require our precision measurement solutions. We have a strong portfolio of products and brands and the capability to capitalize on growing opportunities in new markets such as electrification and data centers.

I want to thank all the members of the VPG family for their hard work and dedication as well as our customers, vendors, strategic business partners and stockholders for their continued support.

Sincerely,

A handwritten signature in black ink, appearing to read 'Saul V. Reibstein', with a stylized flourish at the end.

Saul V. Reibstein
Chairman of the Board
April 14, 2023

From the President and CEO

Dear Stockholders:

I am pleased to report that 2022 marked a record year for VPG.

We grew our revenues 14.0% to \$363.2 million, expanded our diluted net earnings per share by 40.1% to \$2.62, and improved our adjusted EBITDA margin to 17.1% from 15.7% recorded in the prior year. Excluding the negative impact of foreign currency exchange rates, our revenue growth was 20.1% over the prior year.

These results are a continuation of our strong performance over the past several years and a testament to the increasing importance of our precision sensing and measurement solutions, the strength of our business model and our growth strategies.

We are excited about the potential new opportunities for VPG. With our primary focus on solving complex technical challenges that bridge the physical world with the digital one, VPG's sensors are helping to power the future of the world we live in.

Sensors and measurement technologies constitute the first stage of a data value chain. If sensors do not measure accurately, the equipment and systems downstream won't perform to specification. This is particularly important for critical applications and in harsh environments where precision, accuracy, and reliability are absolutely essential. For these applications, VPG is focused on enabling equipment manufacturers to solve their most complex sensing and measurement challenges and, in doing so, on making our customers' products and processes safer, smarter, and more productive.

Our strong cash from operations and our solid balance sheet provide us a solid platform to support our growth and achieve our financial objectives. Our capital allocation strategy is focused on creating shareholder value with three priorities: 1) internal investment to support our organic growth; 2) strategic M&A; and 3) stock repurchases.

In terms of internal investments, 2022 was another important year for us as we continued to streamline our manufacturing capability while expanding our ability to address new higher volume opportunities that will further accelerate our growth. For 2023, we plan to complete infrastructure projects for precision resistor and load cells, which follow the significant investments we've already made over past several years. As we complete our current projects in 2023, we expect capital spending to return to more historical levels of approximately 4% to 5% of revenue.

Regarding M&A, we continue to look for attractive, high-quality businesses that meet our stringent requirements for strategic fit, financial returns, and value creation. We are currently seeing more activity and more opportunities on the M&A front.

And finally, regarding the stock repurchase program we announced in August 2022 as a means of returning cash to our stockholders, through the end of 2022 we repurchased approximately \$2.7 million of our stock, or about 85,000 shares.

I want to thank our stockholders for their support, and express my deep appreciation to our employees and customers around the world for making 2022 a record year for VPG.

Sincerely,



Ziv Shoshani
President and Chief Executive Officer
April 14, 2023

Note: See our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 and investor presentations on our website for reconciliations of financial measures presented under accounting principles generally accepted in the United States of America ("GAAP") to non-GAAP financial measures.

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

FORM 10-K

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

For the fiscal year ended December 31, 2022

or

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

For the transition period from _____ to _____

Commission file number 1-34679

Vishay Precision Group, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

27-0986328

(IRS employer identification no.)

**3 Great Valley Parkway, Suite 150
Malvern, PA 19355**

(Address of principal executive offices)

484-321-5300

(Registrant's telephone number, including area code)

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

Common Stock, \$0.10 par value

(Title of class)

VPG

(Trading Symbol)

New York Stock Exchange

(Exchange on which registered)

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

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

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

Note – Checking the box above will not relieve any registrant required to file reports under Section 13 or 15(d) of the Exchange Act from their obligations under those Sections.

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

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

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

Large accelerated filer

☐

Accelerated filer

☒

Non-accelerated filer

☐

Smaller reporting company

☐

Emerging growth company

☐

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the voting stock held by non-affiliates computed by reference to the price at which the common stock was last sold as of the last business day of the registrant's most recently completed second fiscal quarter (\$28.20 on July 2, 2022), assuming conversion of all of its Class B convertible common stock held by non-affiliates into common stock of the registrant, was \$358,960,000. There is no non-voting stock outstanding.

As of March 1, 2023, the registrant had 12,555,212 shares of its common stock and 1,022,887 shares of its Class B convertible common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement, which will be filed within 120 days of December 31, 2022, are incorporated by reference into Part III of this Annual Report on Form 10-K.

Vishay Precision Group, Inc.

Form 10-K for the year ended December 31, 2022

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PART I

Item 1. BUSINESS DESCRIPTION

General

Vishay Precision Group, Inc. (“VPG,” the “Company,” “we,” “us” or “our”) is a global, diversified company focused on precision measurement and sensing technologies that help power the future by bridging the physical world with the digital one. Many of our specialized sensors, weighing solutions, and measurement systems are “designed-in” by our customers, and address growing applications across a diverse array of industries and markets. Our products are marketed under brand names that we believe are characterized as having a very high level of precision and quality, and we employ an operationally diversified structure to manage our businesses.

Driven by the continued proliferation of data generated by the expanding use of sensors across a widening array of industrial and non-industrial applications, precision measurement and sensing technologies help ensure and deliver required levels of quality of mission-critical or high-value data. VPG’s products are often at the first stage of a data value chain (i.e., the process of converting the physical world into a digital format that can be used for a specific purpose) and as such impact the effectiveness of vast number of critical, high-value downstream processes. Over the past few years, we have seen a broadening of precision sensing applications in both our traditional industrial markets and new markets, due to the development of higher functionality in our customers' end products. Our precision measurement solutions are used across a wide variety of end markets upon which we focus, including industrial, test and measurement, transportation, steel, medical, agriculture, avionics, military and space, and consumer product applications. The Company has a long heritage of innovation in sensor technologies that provide accuracy, reliability and repeatability that make our customers' products safer, smarter, and more productive. As the functionality of customers products continues to increase, and they integrate more precision measurement sensors and related systems into their solutions, we believe this will offer substantial growth opportunities for our products and expertise.

Our History

On July 6, 2010, our company was spun off by Vishay Intertechnology, Inc. (“Vishay Intertechnology”) through a tax-free stock dividend of VPG stock to Vishay Intertechnology’s stockholders, and we became a publicly-traded company. Vishay Intertechnology was founded in 1962 by Dr. Felix Zandman to develop and manufacture the first generation of Bulk Metal® foil resistors and later, foil strain gages. Shortly after its founding, Vishay Intertechnology established itself as a technical and market leader in precision foil resistors, and foil strain gages. These innovations were the genesis of the products and technology that provide a unique strategic competitive advantage for VPG, as these products were transitioned to VPG from Vishay Intertechnology as part of the spin off.

In the decade prior to the spin-off, Vishay Intertechnology expanded our sensor and measurement business through acquisitions, extending our business from its initial focus on precision foil resistors and foil strain gages to include an array of load cell-based solutions.

Since becoming an independent company, we have made several acquisitions that have added to our strong, diverse, global manufacturing, sales and distribution network, which includes facilities in Canada, People's Republic of China, France, Germany, India, Israel, Japan, Sweden, Republic of China (Taiwan), the United Kingdom, and the United States.

We were incorporated in Delaware on August 28, 2009. Our principal executive offices are located at 3 Great Valley Parkway, Suite 150, Malvern, PA 19355. Our main telephone number is 484-321-5300.

Key Business Vision and Strategies

Our vision is to be a leading provider of precision measurement and sensing technologies, which include sensors, weighing solutions and measurement systems that deliver accuracy, reliability and repeatability that make our customers' products safer, smarter, and more productive. VPG delivers in-depth, deep engineering expertise to the design and manufacture of non-commodity sensors, weighing solutions and precision measurement systems that optimize and enhance our customers’ solutions performance across a broad array of end markets.

Our strategy is to leverage our core technologies and competitive positions in our home markets, establishing an accelerated organic growth, as well as by acquiring complementary precision measurement sensing products. Specifically, we are focused on the following strategic initiatives:

Operationally Diversified

In the fourth quarter of fiscal 2021, we formally adopted an operationally diversified structure and strategy, through which each of VPG's business segments maintains and deploys distinct go-to-market strategies, technical expertise, capital requirements, and acquisition opportunities. We use an operationally diversified strategy and structure to be close to our customers and to leverage our high-level engineering expertise to optimize and enhance the performance of our customers' solutions. We seek to maximize the performance and value of our businesses by leveraging our accumulated experience, methodologies, and expertise in driving operational excellence across our functional areas, as well as in the allocation of capital and investment.

Optimize Core Competence

The Company's core competencies include our innovative deep technical and applications-specific expertise to add value to our customers' products, our strong brands and customer relationships, our focus on operational excellence, our ability to select and develop our management teams, and our proven M&A strategy. We continue to optimize all aspects of our development, manufacturing and sales processes, including by increasing our technical sales efforts; continuing to innovate in product performance and design; and refining our manufacturing processes.

Our Sensors segment research group developed innovations that enhance the capability and performance of our strain gages, while simultaneously reducing their size and power consumption as part of our advanced sensors product line. We believe this unique foil technology will create new markets as customers "design in" these next generation products in existing and new applications. Our development engineering team is also responsible for creating new processes to further automate manufacturing, and improve productivity and quality. Our advanced sensors manufacturing technology also offers us the capability to produce high-quality foil strain gages in a highly automated environment, which we believe results in reduced manufacturing and lead times, improved quality and increased margins. As a sign of our commitment to these businesses, we signed a long-term lease for a state-of-the-art facility that has been constructed in Israel. We fully transitioned to this facility in the third quarter of fiscal 2021.

We also seek to achieve significant production cost savings through the transfer, expansion, and construction of manufacturing operations in countries such as India, Japan, and Israel, where we can benefit from improved efficiencies or available tax and other government-sponsored incentives. In the past several years, we incurred restructuring expense related to closing and downsizing of facilities as part of the manufacturing transitions of our load cell products to facilities in India and China, which marked key milestones in our ongoing strategic initiatives to align and consolidate our manufacturing footprint.

Organic Growth

Our product portfolio is focused, to a significant extent, on specialty products serving niche markets. The development of specialty products requires us to form long-term relationships with our customers. Our specialty products are usually designed, or engineered, to meet unique specifications for OEMs. This often results in our customers creating a non-standard part number used solely to designate our product on their bill of materials. We call this customer activity a "design win." This activity may create organic growth as the OEM customer begins to order increasing quantities to meet their production requirements, with little or no opportunity to purchase a similar part from competing suppliers. The "design in" time for these initiatives is typically 12 to 24 months.

We expect to continue to use our research and development, engineering, and product marketing resources to introduce new and innovative specialty products. An example of our success in this regard is the recent acceptance and growth of our on-board vehicle weighing solution incorporating microelectromechanical systems ("MEMS") technology. Our ability to react to changing customer needs, emerging markets, and industry trends will continue to be a key to our success.

Our design, research, and product development teams, in partnership with our marketing teams, drive our efforts to bring innovations to market. We intend to leverage our insights into customer demand to continually develop and roll out new, innovative products within our existing lines and to modify our existing core products in ways that make them more appealing, addressing changing customer needs and industry trends in terms of form, fit, and function.

Growth from Acquisitions

We expect to continue to make strategic acquisitions where opportunities present themselves to grow and expand our segments. Historically, our growth and acquisition strategy had been largely focused on vertical product integration, using our foil strain gages in our load cell products, and incorporating those products into our weighing solutions. In recent years, we widened our acquisition strategy to include a broader set of precision measurement systems and product companies.

In 2013, we completed our first acquisition as an independent public company when we acquired substantially all of the assets of the George Kelk Corporation ("KELK"). KELK engineers, designs and manufactures highly accurate optical and electronic roll force measurement and control equipment primarily used by metals rolling mills and mining applications throughout the world.

On December 30, 2015, we completed the acquisition of Stress-Tek, Inc. ("Stress-Tek") based in Kent, Washington. Stress-Tek designs and manufactures state-of-the-art, rugged and reliable strain gage-based load cells and force measurement systems. Stress-Tek primarily operates in North America, where their sensors and display systems are used in a wide range of industries, predominantly in transportation and trucking, for timber, refuse, aggregate, mining, and general trucking applications.

On April 6, 2016, we completed the acquisition of Pacific Instruments, Inc. ("Pacific Instruments") based in Concord, California. Pacific Instruments designs and manufactures high-performance signal conditioning, data acquisition and control systems and has extensive experience integrating these systems. Pacific Instruments sells primarily to the aerospace, commercial aviation and defense markets in the United States.

On November 1, 2019, we completed the acquisition of New York-based Dynamic Systems Inc. ("DSI"), a provider of specialized dynamic thermal-mechanical test and simulation systems used to develop new metal alloys and optimize production processes. DSI is an established, high margin business, with a strong brand and has the largest installed base of products of its type in the world, according to market estimates. DSI expands our position in the steel market and offers opportunities for growth by leveraging our sales capabilities and market presence, and by expanding DSI's product line to address new opportunities.

On June 1, 2021, we completed the acquisition of California-based Diversified Technical Systems, Inc. ("DTS"), a leading manufacturer of data acquisition systems and sensors for product and safety testing. DTS's embedded data acquisition and data logging products expands our offerings to the automotive and avionics, military, and space markets. We believe DTS will continue to benefit from the global need for specialized safety testing that is expanding from the automotive and avionics sectors to sports applications. As a result of our acquisition, we acquired a leased manufacturing, engineering, sales and administrative facility in Seal Beach, California.

We expect to expand our expertise, and our acquisition focus, outside our traditional vertical approach to other precision measurement solutions, including in the fields of measurement of force, weight, pressure, torque, tilt, motion, and acceleration. We believe acquired businesses will benefit from improvements we implement to reduce redundant functions and from our current global manufacturing and distribution footprint.

Leverage Global Brand

While our acquisitions provided us an array of strong brand names, in addition to our historical resistor and strain gage brands, we believe the continued success of our strategy is best served by the establishment of a strong overall global brand. The "VPG" brand leverages the strength of these historical brands under the umbrella of a unified, globally recognizable VPG name. We continue to broaden and emphasize the VPG brand in the markets we serve under the following brands for each of our business segments:

<u>Sensors</u>	<u>Weighing Solutions</u>	<u>Measurement Systems</u>
VPG Foil Resistors	VPG Transducers	KELK
- <i>VFR</i>	- <i>Celtron</i>	Dynamic Systems Inc. or Gleeble
- <i>Alpha Electronics</i>	- <i>Revere</i>	DTS
- <i>Powertron</i>	- <i>Sensortronics</i>	Pacific Instruments
- <i>APR</i>	- <i>Tedea-Huntleigh</i>	
Micro-Measurements	VPG Onboard Weighing	
	Stress-tek	
	Vulcan	
	BLH Nobel	

Business Segments and Products

Each of VPG's business segments maintains and deploys specific go-to-market strategies, technical expertise, capital requirements, and acquisition opportunities, which are in line with our operationally diversified structure and strategy. VPG reports in three product segments: Sensors, Weighing Solutions, and Measurement Systems.

Sensors

The Sensors segment is comprised of our precision resistor and strain gage businesses. Precision resistor products offer superior precision, stability, and reliability. Our resistor portfolio encompasses a wide variety of configurations and packages designed to meet the requirements of even the most demanding applications.

Precision resistors are the most precise and stable type of resistors currently available. Resistors are basic components used in all forms of electronic circuitry to adjust and regulate levels of voltage and current. Our current sense resistors were developed with a low absolute TCR and Kelvin connections to meet the demand of stable resistive products.

Our precision resistors are based on Bulk Metal Foil® technology and are used in diverse applications, which require a high degree of precision and stability. The main market segments for our precision resistors are as follows: Avionics & Military, Space Communications, Fiber Optics, Industrial Automation, EV Battery Management Infrastructure, and Precision Weighing, Test & Measurements / Semiconductors and others. Foil resistors are marketed under four different brands: VFR, Alpha Electronics, Powertron and APR. APR is our off the shelf commercial product line based on AEC-Q200 standardization. To complement our extensive portfolio of high-performance precision resistors, we also offer decade boxes, standard resistors, exceptional precision thin film and power resistors including special construction configurations to meet the requirements of high temperature applications. We have a road map of new technology products to meet the required needs of our customers.

Our strain gage products, which include our advanced sensors, are resistive sensors that are attached to the surface of an object to determine the surface strain caused by an applied force. Marketed under the well-known Micro-Measurements brand, our strain gages are used for OEM and in stress analysis applications for structural testing in the aviation, military and space, infrastructure, and construction markets, along with force measurement and weighing markets. Typical applications of strain gages include test and measurement applications where the strength of the object is the main consideration and the object under test is a structural component in a machine or device, such as an automobile, an aircraft, or a highway bridge. Strain gages are also used inside precision transducers where the magnitude of an applied force is the focus of the measurement. Using strain gages attached to metal components, a variety of physical measurements can be made including force, weight, pressure, displacement, and acceleration. Our innovative advanced sensors product line enhances the capability and performance of our strain gages, while simultaneously reducing their size and power consumption.

A portion of our strain gage products are sold to third parties as “standard catalog items”, while the remainder of these products are sold as non-standard and/or custom products to third parties and to our Weighing Solutions segment. Strain gage products are sold across several of our market sectors, with a significant portion being sold to consumer end markets.

The products in the Sensors segment are primarily based on our resistive foil technology, which continues to evolve and enables many products in both segments to be suited for new and varied applications.

The manufacturing of the foil material is a critical and common component of the Company's strain gage and precision foil resistor operating segments, and as a result, we experience synergies between our precision resistor and strain gage operating segments. The production cycles for precision resistors and strain gages are similar and many of the same raw materials are utilized in the manufacturing processes for both operating segments. The foil resistor and strain gage products require a similar level of labor and capital. However, the advanced sensors' manufacturing technology offers us the capability to produce high-quality foil strain gages in a highly automated environment, which we believe results in reduced manufacturing costs and lead times, higher quality, and increased margins.

Weighing Solutions

The Weighing Solutions segment is comprised of our VPG Transducers, VPG Onboard Weighing, BLH Nobel, Stress-Tek and Vulcan businesses.

VPG Transducers offers a broad line of load cells and force measurement transducers, which also known as force sensors, that are offered as precision sensors for industrial and commercial use. Typical applications for force sensors are in construction machinery (for stability control, overload protection), agricultural equipment (for precision force measurement), and medical devices (such as hospital beds and medication dosing). The heavy equipment market has begun to adopt load cell technology as process control and equipment control features for their products. In some cases, these products use our strain gage products, which serve as sensing elements and components within each unit. Further integration of our load cell technology is also

offered as part of our weighing module products, which provide customers with a complete sensor assembly that may be used within a wide variety of digital transducers.

A transducer is mounted on a structure that is subjected to weight or other forces, such as the platform of an industrial scale. The term “load cell” is primarily used to describe transducers used in weighing applications. Strain-gage based transducers consist of one or more strain gages bonded to a metallic support. The change in resistance of the strain gages in response to deformation of the transducer by the applied load is detected by electronic instrumentation. Transducers are manufactured with different designs and configurations depending on their application and the type of stress or strain to be measured; for example, weight or tension. We produce both analog and digital transducers. Modules are transducers combined with a mounting and with external features, such as instruments and cables, and are used for weighing and control applications. We sell our load cells and modules under the overall VPG Transducers name as we continue to transition from the previously used Celtron, Revere, Sensortronics, and Tedeo-Huntleigh brands.

Approximately half of VPG Transducer load cell products are sold to third parties as “standard catalog items,” but a growing sector of this segment’s products are sold as non-standard and/or custom products to third parties including OEM manufacturers. Our sales teams act as direct sales channels (field application engineers (“FAEs”)) utilizing the primary customer interface relating to initial design specifications, development of prototypes, and pricing/delivery of this segment’s products. Distributors are also used for those customers that desire standard products.

Our VPG Onboard Weighing business specializes in high-quality, high-accuracy vehicle weighing and load monitoring systems for all commercial vehicle types, including trucks, vans and specialty vehicles. Many of these products use solid-state sensors. VPG Onboard Weighing products, sold under the brand names TruckWeigh and VanWeigh, are used by drivers and fleet operators to monitor vehicle loads within legally permitted limits and regulations.

Our Stress-Tek, Vulcan, and BLH Nobel businesses mainly provide load cells and instrumentation for weighing and force control/measurement for a variety of uses. These include systems to control process weighing in food, chemical, and pharmaceutical plants; force measurement systems used to control web tension in paper mills, cable tension in winch controls; onboard weighing systems installed in logging and waste-handling trucks; and special scale systems used for aircraft weighing and portable truck weighing.

Major components that comprise our Weighing Solutions products include: load cells, electronic displays, signal processors, MEMS sensors, cabling, system software, and communications software/hardware. The end use for the majority of these products is the precision measurement of force, weight, pressure, torque, tilt, motion, and acceleration. FAEs are utilized as the primary customer interface relating to initial design specifications, development of prototypes, and pricing/delivery of this segment’s products. We also use distributors and sales agents, as appropriate, to market, sell, and support certain products in this segment.

Measurement Systems

The Measurement Systems segment includes highly specialized systems for steel production, materials development, and safety testing. This segment is comprised of our KELK, DSI, Pacific Instruments, and our DTS businesses.

Our KELK business provides high accuracy and performance sensors and systems for the steel and aluminum industries — and within those industries, mainly for rolling mills. KELK’s products include rolling force measuring load cell systems and pressure transmitters; web tension measurement load cells and systems; optical strip width gages; laser velocimeters for speed and length measurements, and closed-loop crop optimization control systems for optimal strip cuts. Our products are required to meet the most demanding requirements of the steel and aluminum industries, providing high accuracy and reliability under the most demanding harsh conditions of rolling mills.

Our DSI business specializes in thermal-mechanical simulation systems for metallurgical research. Marketed under the name “Gleeble®”, DSI’s line of physical simulation systems are used by universities, research departments, and development departments within the steel ecosystem to accelerate the development of new metal alloys, explore new production techniques, optimize existing processes, or simulate the conditions a material will face in the real world.

Our Pacific Instruments business offers a broad range of high performance signal conditioning, data acquisition and control systems, many of which reach customers outside our traditional commercial customer base, such as U.S. government-related customers.

Our DTS business provides data acquisition systems and sensors for product safety testing. As a major supplier of embedded data acquisition and data logging capabilities for crash test dummies, DTS expands our offering in the automotive market and in the avionics, military and space market. We believe DTS will continue to benefit from the global need for specialized safety testing technology that is expanding from the automotive and avionics sectors to other applications such as sports safety.

Qualifications and Specifications

Certain of our products must be qualified or approved under various military and aerospace specifications and other standards.

We have qualified certain of our foil resistor and sensor products under various military specifications approved and monitored by the United States Defense Logistics Agency (“DLA”), under certain European military specifications, and various aerospace standards approved by the U.S. National Aeronautics and Space Administration (“NASA”) and the European Space Agency (“ESA”).

Qualification and specification levels are based in part upon the rate of failure of products. We must continuously perform tests on our products, and report the results for qualified products to the qualifying organization. If a product fails to meet the requirements for the applicable classification level, the product’s classification may be suspended or reduced to a lower level. During the time that the classification is suspended or reduced, net revenues and earnings attributable to that product may be adversely affected.

Certain of our load cell and instrumentation products are approved by the National Type Evaluation Program (“NTEP”) and International Organization of Legal Metrology (“OIML”). Many of our weighing systems must also meet these standards to make them usable for legal-for-trade weighing applications. Products and systems that are to be used in hazardous areas, where explosive atmospheres might exist, must comply with special safety standards, such as the European Atmosphère Explosible (“ATEX”) Standard and the U.S. Factory Mutual (“FM”) Standard. Our load cell manufacturing sites undergo periodic audits by regulatory authorities in order to verify compliance with standard requirements and to extend product approvals.

Manufacturing Operations

Our principal manufacturing facilities are located in Israel, the United States, Canada, India, the People’s Republic of China, Germany, and Japan. We also have manufacturing facilities in Sweden, the United Kingdom, the Republic of China (Taiwan), and France. Over the past several years, we have invested substantial resources to increase capacity and to enhance automation in our plants, which we believe will further reduce production costs.

We have quality management systems at all of our major manufacturing facilities approved under the ISO 9001 Quality Management Systems Standard. ISO 9001 is a comprehensive set of quality program standards developed by the International Organization for Standardization (“ISO”). The quality management system in our major foil resistors manufacturing site is certified against Aerospace Standard AS9100.

Our DTS business unit, manufacturing data acquisition systems, data loggers and sensors for critical testing for aerospace, military, crash safety, is certified to ISO/IEC 17025 standard. Compliance to this standard ensures that the DTS facilities operate quality management systems, are technically competent and generate technically valid results.

To maintain our cost competitiveness, we are pursuing our strategic initiatives to shift manufacturing emphasis to more advanced automation in higher-labor-cost regions and to relocate production to regions with skilled workforces and relatively lower labor costs. See additional information in Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Cost Management” related to our restructuring efforts.

Sources of Supplies

Although most materials incorporated in our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers. The principal materials used in our products include various metallic foil alloys, aluminum, stainless steel, tool steel, plastics, and for a few products, gold. Some of the most highly specialized materials for our sensors are sourced from a single vendor. We maintain a safety stock inventory of certain critical materials at our facilities. We are taking steps to determine the use, source, and origin of any tin, tantalum, tungsten, or gold in our global product portfolio and, if appropriate, would work with our suppliers to remediate issues and source more responsibly.

A portion of our Weighing Solutions and Measurement Systems segment products are based on strain gages produced by our Sensors segment.

Inventory and Backlog

We manufacture both standardized products and those designed and produced to meet customer specifications. We maintain an inventory of standardized components, and monitor the backlog of outstanding orders for our products.

We include in our backlog only open orders that have been released by the customer for shipment in the next twelve months. Many of our customers for strain gages, load cells, and foil resistors encounter uncertain and changing demand for their products. They typically order products from us based on their forecasts. If the customers' business needs change, they may

cancel or reschedule the shipments that are included in our backlog, in many instances without the payment of any penalty. Therefore, the backlog at any point in time is not necessarily indicative of the results to be expected for future periods.

Customers and Marketing

Our customer base is diversified in terms of industry, geographic region, and range of product needs. No single customer comprises greater than 10% of net revenues. A portion of our products are used in the broad industrial market for wide variety of applications in waste management, bulk hauling, logging, scales manufacturing, engineering systems, pharmaceutical, oil, chemical, steel, paper, and food industries. In addition, we sell to an expanding array of end markets including test and measurement, steel, medical, construction, agricultural, and consumer.

Many of our products have historically been sold by dedicated sales forces, consisting mainly of FAEs focusing on specific market segments or specific customers. The FAEs help identify the products in our portfolio that best meet the needs of our customers and provide technical and applications support. Their in-depth knowledge of customer needs is a key factor in new product design and future research and development initiatives.

Competition

Our competitive success depends on our ability to maintain a competitive advantage on the basis of superior product capability and performance, product quality, know-how, proprietary data, market knowledge, service capability and business reputation. Price competitiveness can be an important factor, especially within our Weighing Solutions segment. Our sales and marketing programs offer our customers a broad range of world-class precision technologies, and superior global sales and support.

Competition in the markets where we sell the bulk of our products is extremely fragmented, both geographically and by application. To our knowledge, there are no competitors with the same product mix and proprietary technology as ours. Our competitors range from very small, local companies to large, international companies with greater financial resources than us.

Our foil resistors and our foil strain gages are based on our proprietary technology. Competitors try to compete in this market using different technology to offer functionally equivalent products. Examples of competition in our Sensors segment includes KOA, Bourns, Vishay Intertechnology, TT Electronics, Susumu, Isabellenhute, Caddock and Flat Dashi for foil resistors, and HBK, an operating company of Spectris, Tokyo Sokki Kenkyujo Co., Ltd (TML), Kyowa and Zemic for foil strain gages. Competitors in our Weighing Solutions segment include HBK, Zemic, Utilcell, Flintec, Hardy Instruments and Mettler-Toledo for load cell products, and Air-Weigh, Vehicle Weighing Systems, MOBA, and AMCS for onboard weighing products. In the Measurement Systems segment, we compete with ABB, Siemens, Haehne, Dalian, IMS and Fuji in the steel market and Kistler for data acquisition systems.

Research and Development

Many of our products, manufacturing techniques, and technologies have been invented, designed, and developed by our engineers and scientists. Special proprietary resistive metal foil is the most important material in both our foil resistors and our foil strain gages, and our research and development activities related to foil materials are an important linkage between these two products.

We maintain strategically placed design centers for each of our business segments where proximity to customers enables us to more easily monitor and satisfy the needs of local markets. These design centers are located in the United States, Israel, Canada, Sweden, Japan, the United Kingdom, and Germany.

We also maintain research and development staff, and promote programs at a number of our production facilities to develop new products and new applications of existing products, and to improve manufacturing techniques. This decentralized approach encourages individualized product development at specific manufacturing facilities that occasionally has applications at other facilities.

Our research and development staff and our sales force are closely linked. Our sales force is comprised of individuals with an engineering background who can help meet the needs of our customers for technical and applications support. This in-depth knowledge of customer needs and specifications is a key factor in future research and development initiatives.

Research and development will continue to play a key role in our efforts to introduce innovative products for new sales, and to improve profitability. We expect to continue to expand our position as a leading supplier of precision foil technology products. We believe our R&D efforts should provide us with a variety of opportunities to leverage technology, products, and our manufacturing base and, ultimately, our financial performance. To that end, we expect to sustain or increase our R&D expenditures in order to fill the product development pipeline and lay the foundation for future sales growth.

Patents and Licenses

We have made a significant investment in securing intellectual property protection for our technology and products. We seek to protect our technology by, among other things, filing patent applications for technology considered important to the development of our business. Although we have numerous United States and foreign patents covering certain of our products and manufacturing processes, no particular patent is considered individually material to our business. We also rely upon trade secrets, unpatented know-how, and continuing technological innovation.

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology. Although we have been awarded, have filed applications for, or have obtained numerous patents in the United States and other countries, there can be no assurance concerning the degree of protection afforded by these patents, or the likelihood that pending patents will be issued.

We require all of our technical, research and development, sales and marketing, and management employees, and most consultants and other advisors to execute confidentiality agreements upon the commencement of employment, or consulting relationships with us. These agreements provide that all confidential information developed, or made known to the entity or individual during the course of the entity's or individual's relationship with us, is to be kept confidential and not disclosed to third parties except in specific circumstances. Substantially all of our technical, research and development, sales and marketing, and management employees have entered into agreements providing for the assignment to us of rights to inventions made by them while employed by us.

Environmental, Social and Governance

As part of our launch of a corporate Environmental, Social and Governance ("ESG") program in 2022, we completed a materiality assessment, developed a multi-year ESG plan, and established an internal scorecard with short and long-term objectives.

The implementation of our multi-year ESG plan is on track as evidenced by our actions over the past year, which include revising our Board Committee charters and other applicable governance documents to include ESG-related topics and oversight, launching a sustainability website, sharing key ESG performance indicators with our stockholders, key stakeholders and the general public and adding ESG policies on Human Rights and Solid and Hazardous Waste. Our multi-year ESG plan continues to be built on four pillars: Our People, Our Environment, Our Governance and Our Products, and serves as a guiding framework that will be added to as new trends, requests from stakeholders and internal business strategies require.

We have issued an Environmental, Health and Safety Policy that sets forth our commitment to achieving health and safety for employees and protecting of the environment, to maintaining compliance with applicable environmental, health and safety laws, to promoting proper management of hazardous materials, and to minimizing the hazardous materials generated in the course of our operations. In addition, our manufacturing operations are subject to various regional, federal, state, and local laws restricting discharge of materials into the environment. Since we are subject to Environmental, Health and Safety laws worldwide we incur capital and operating expenditures and other costs to comply with such laws and any investigations of us related to such laws.

Human Capital

As of December 31, 2022, we employed approximately 2,700 total employees, substantially all of which were full-time employees. Approximately 84% of our employees were located outside the United States. Our future success is substantially dependent on our ability to attract and retain highly qualified technical and administrative personnel. Some of our employees outside the United States are members of trade unions.

We support worldwide employment and promotion of diversity to innovate and drive long-term value, by continuous monitoring of compensation and benefits to assure competitiveness, while implementing a worldwide talent strategy that includes workforce planning and succession planning.

The impact of COVID-19 on our operations has been mitigated through the issuance of Guidelines for Manufacturing Safety, Travel Safety and Personal Protective Equipment sourcing to ensure employee and visitor, contractor safety and continuity of operations. We have had no employee strikes or work stoppages due to labor disputes and we consider our relationship with employees to be generally good, however, no assurance can be given that labor unrest or strikes will not occur. We continue to support employee's rights to collective bargaining and other recognized employee interests to organize.

Information about our Executive Officers

The following table sets forth certain information regarding our executive officers as of March 1, 2023:

<u>Name</u>	<u>Age</u>	<u>Positions</u>
Ziv Shoshani	56	Chief Executive Officer, President, and Director
William M. Clancy	60	Executive Vice President and Chief Financial Officer
Amir Tal	53	Senior Vice President and Chief Accounting Officer

Ziv Shoshani is our Chief Executive Officer and President, and also serves on the Board of Directors. Mr. Shoshani was Chief Operating Officer of Vishay Intertechnology from January 1, 2007 to November 1, 2009. During 2006, he was Deputy Chief Operating Officer of Vishay Intertechnology. Mr. Shoshani was Executive Vice President of Vishay Intertechnology from 2000 to 2009 with various areas of responsibility, including Executive Vice President of the Capacitors and the Resistors businesses, as well as heading the Measurements Group and Foil Divisions. Mr. Shoshani had been employed by Vishay Intertechnology since 1995. He continues to serve on the Vishay Intertechnology board of directors. Mr. Shoshani is a nephew of Mrs. Ruta Zandman, the widow of the late Dr. Felix Zandman, the founder of Vishay Intertechnology.

William M. Clancy is our Executive Vice President and Chief Financial Officer. Mr. Clancy was Corporate Controller of Vishay Intertechnology from 1993 until November 1, 2009. He became a Vice President of Vishay Intertechnology in 2001 and a Senior Vice President of Vishay Intertechnology in 2005. Mr. Clancy served as Corporate Secretary of Vishay Intertechnology from 2006 to 2009. From June 16, 2000 until May 16, 2005 (the date Vishay Intertechnology acquired the noncontrolling interest in Siliconix incorporated), Mr. Clancy served as the principal accounting officer of Siliconix. Mr. Clancy had been employed by Vishay Intertechnology since 1988. Mr. Clancy is a licensed CPA in Pennsylvania.

Amir Tal is our Senior Vice President and Chief Accounting Officer. Mr. Tal was appointed by the Board of Directors to such position effective February 5, 2020. He served as the Company's Senior Vice President, Finance from March 2017 until February 2020. From July 2010 to February 2017, Mr. Tal served as the Company's Vice President Operational Controller and Regional Controller Israel. Mr. Tal holds a bachelor's degree in economics and business administration from the University of Haifa and an MBA from Bar Ilan University.

Company Information and Website

We began filing annual, quarterly, and current reports, proxy statements, and other documents with the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), after our spin-off from Vishay Intertechnology on July 6, 2010. The SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC. The public can obtain any documents that we file with the SEC at www.sec.gov.

In addition, our company website can be found on the Internet at www.vpgsensors.com. The website contains information about us and our operations. Copies of each of our filings with the SEC on Form 10-K, Form 10-Q, and Form 8-K, and all amendments to those reports, can be viewed and downloaded free of charge as soon as reasonably practicable after the reports and amendments are electronically filed with or furnished to the SEC. To view the reports, access <http://ir.vpgsensors.com> and click on "Financials"/ "SEC Filings."

The following corporate governance related documents are also available on our website:

- Compensation Committee Charter
- Nominating and Corporate Governance Committee Charter
- Audit Committee Charter
- Code of Business Conduct and Ethics
- Code of Ethics Applicable to the Chief Executive Officer, Chief Financial Officer, and Principal Accounting Officer or Controller
- Corporate Governance Principles
- Policy Regarding Qualifications of Directors

To view these documents, access <http://ir.vpgsensors.com> and click on "Sustainability-Governance" and then on "Governance" and then on "Governance Documents."

To view our Ethics Program Reporting Procedures, access <http://www.vpgsensors.com/Ethics>

We are not incorporating by reference into this Annual Report on Form 10-K any material from our website.

Any of the above documents can also be obtained in print by any stockholder, upon written request to our Investor Relations Department at the following address:

Corporate Investor Relations
Vishay Precision Group, Inc.
3 Great Valley Parkway, Suite 150
Malvern, PA 19355

Item 1A. RISK FACTORS

You should carefully consider the following risks and other information in this Form 10-K in evaluating our company and common stock. Any of the following risks, as well as additional risks and uncertainties not currently known to us or that we currently deem immaterial, could materially and adversely affect our business, results of operations or financial condition, and could also adversely affect the trading price of our common stock.

Risks Related to Our Business

The COVID-19 outbreak has adversely impacted and could continue to adversely impact our results of operations.

The impact of the COVID-19 outbreak on a global basis has adversely affected and is likely to continue to adversely affect our business in a number of respects, although the further extent, nature and timing of such impact cannot be predicted at this time. The COVID-19 outbreak has led countries around the world, as well as most states in the U.S., to from time-to-time implement restrictions relating to the operation of almost all types of businesses. The closure standards vary from jurisdiction to jurisdiction, but they typically require all but “critical”, “essential” or “life-sustaining” businesses to close all offices and facilities. We believe, based on the various standards published to date, that our businesses meet or will meet the requisite standards to remain open, at least partially, in all jurisdictions in which we operate, although there is no assurance that our decision to remain open will not be challenged.

To date, our supply chain has not experienced significant disruptions as a result of the COVID-19 pandemic. However, our suppliers could be required by government authorities to temporarily cease operations in accordance with the various restrictions discussed above, might be limited in their production capacity due to complying with restrictions relating to the operation of businesses during the COVID-19 pandemic, or could suffer their own supply chain disruptions, impacting their ability to continue to supply us with the quantity of materials required by us.

If as a result of the COVID-19 outbreak governments take additional protective actions, or extend the time period for existing protective actions, or the distribution and administration of the vaccines for COVID-19 are delayed, disrupted, or prolonged, such actions or events may have a material adverse impact on our business and operating results. This could include closures of our facilities or the closure of the facilities of our customers, suppliers, or other vendors in our supply chain. Any disruption of our supply chain or the businesses of our customers could adversely impact our business and results of operations. The extent and duration of the impact on the global economy and financial markets from COVID-19 is difficult to predict, and the extent to which COVID-19 will negatively affect us and the duration of any potential business disruption is uncertain. The impact to our business and results of operation will depend to a large extent on future developments and new information that may emerge regarding the duration and severity of the COVID-19 outbreak and the actions taken by authorities and other entities to contain COVID-19 or treat its impact, and the impact of such actions, all of which are beyond our control. These potential impacts, while uncertain, could adversely affect our operating results.

A shortage of qualified labor could have a material adverse effect on our business and results of operations.

Labor is a significant component of operating our business. A number of factors may adversely affect the labor force available to us or increase labor costs, including general macroeconomic conditions, high employment levels, federal unemployment subsidies, increased wages offered by other employers, vaccine mandates and other government regulations and our responses thereto. We are currently experiencing a shortage of qualified labor in certain geographies, particularly with manufacturing plant production workers in the United States, Israel and Japan. Outside suppliers that we rely on have also experienced shortages of qualified labor. A prolonged shortage of qualified labor could, among other things, decrease our ability to effectively produce and meet customer demand, and could have a material adverse effect on our business and results of operations.

We face intense competition in our business.

We face various degrees and types of competition throughout the world in our different businesses. We are a leading supplier of foil resistors and foil strain gages. Foil resistors and foil strain gages are also produced by competitors, principally located in China. We believe that our products provide superior performance relative to our competitors, but that could change if our competitors succeed in developing and introducing innovative competitive offerings. Also, our foil strain gages compete with other types of strain gages, such as semiconductor strain gages, which we do not manufacture. We believe that other types of strain gages are not as reliable or stable as our foil strain gages, but that could change as the technology for these other products continues to evolve. If our competitors are able to improve the quality, performance, or pricing of their products relative to our offerings, our results of operations could be adversely affected.

The market for transducer/load cell products is highly fragmented and very competitive. Our load cell modules and systems face competition from numerous other load cell module and systems manufacturers. Competition for modules and systems is most often based on customer relationships, product reliability, technical performance, and the ability to anticipate and satisfy customer needs for specific design configurations. Many other manufacturers have more experience in particular geographic

markets and specific applications than we do, and may be better positioned to compete in these areas. We cannot assure you that we will be able to successfully grow our business in the face of these competitive challenges.

To remain successful, we must continue to innovate, and our investments in new technologies may not prove successful.

Our future operating results depend on our ability to continually develop, introduce, and market new and innovative products, to modify existing products, to respond to technological change, and to customize certain products to meet customer requirements. There are numerous risks inherent in this process, including the risks that we will be unable to anticipate the direction of technological change, that customers may be unwilling, or unable, to adopt the new products or methods of using them, that we will be unable to develop and market new products and applications in a timely fashion to satisfy customer demands, or that such products will experience quality or other qualification issues with our customers as they, and we, gain experience with qualifying them and using them. If this occurs, we could lose customers and experience adverse effects on our financial condition and results of operations.

We may not be successful in future acquisitions or other strategic transaction endeavors, if any, which could have an adverse effect on our business and results of operations.

Historically, we expanded our business in part by completing acquisitions, and an important element of our business strategy continues to be expansion through acquisition. We cannot assure that we will identify, have the financial capabilities to execute, and/or successfully complete strategic transactions with suitable partners in the future. We also cannot assure that any such transactions that we do complete in the future will be successful.

Such transactions involve a number of risks, including the following:

- we may incur substantial costs, including advisory fees and diversion of management attention, in evaluating a potential transaction;
- we may be unable to achieve the anticipated benefits from the transaction;
- we may have difficulty integrating the operations, personnel and culture of an acquired business, and may have difficulty retaining the key personnel of the acquired business;
- we may have difficulty enforcing restrictive covenants against the seller of the acquired business or former employees or other personnel of the acquired business;
- we may have difficulty incorporating acquired technologies or products into our existing solutions;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues, and the complexity of managing geographically and culturally diverse locations; and
- we may lose customers of those companies, or may lose our customers due to the change in control or for other reasons.

The factors noted above could have a material adverse effect on our business, results of operations, and financial condition or cash flows, particularly in the case of a larger acquisition. From time to time, we may enter into negotiations for acquisitions or investments that are not ultimately consummated. These negotiations could result in significant diversion of management time, as well as out-of-pocket costs.

Future acquisitions may require us to incur or issue additional indebtedness or issue additional equity.

If we were to undertake future substantial acquisitions for cash, these acquisitions would likely need to be financed in part through bank borrowings, or the issuance of public or private debt. This acquisition financing would likely adversely affect certain credit metrics. Our revolving credit facilities require us to obtain the lenders' consent for certain additional debt financing and to comply with other covenants, including the application of specific financial ratios. We cannot assure that the necessary acquisition financing would be available to us on acceptable terms, if and when, required. If we were to make an acquisition with equity, the acquisition may have a dilutive effect on the interests of the holders of our common stock.

We may experience difficulties, delays, or unexpected costs in completing our cost reduction programs.

To remain competitive, particularly when business conditions are difficult, we sometimes take steps to reduce our cost structure by restructuring our existing businesses to achieve efficiencies, eliminate redundant functions, facilities and staff positions, and move operations, where possible, to reduce labor or other costs.

We may not realize, in full or in part, the anticipated benefits of these programs without encountering difficulties, which may include complications in the transfer of production knowledge, loss of key employees and/or customers, and the disruption of ongoing business. Any of these difficulties could delay and/or undermine our ability to realize the benefits of these cost reduction programs, as well as potentially adversely affecting our customer relationships and operations.

Our business is cyclical, and in periods of increased economic strength, we may experience intense demand for our products. If our cost reduction programs and related restructuring result in us not being able to satisfy our customer's demand for products during a rising economy, and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our operations, financial condition, and results of operations.

We may encounter difficulties in the implementation or operation of new enterprise resource planning systems.

We have implemented, and continue to implement, new enterprise resource planning (“ERP”) systems in different parts of our business. ERP systems are integral to our ability to accurately and efficiently manage our manufacturing and sales activities, and provide critical business information to management. The implementation of an ERP system may cause us to incur additional costs, shipment delays, and related customer dissatisfaction; expend employee (including Company management) time and attention; and otherwise burden our internal resources. Any difficulties we encounter with the implementation or successful operation of an ERP system could damage the effectiveness of our business processes and could adversely impact our ability to accurately and effectively forecast and manage sales demand, manage our supply chain, and report management information on an accurate and timely basis, any of which could have a material adverse effect on our business and results of operations.

Our success is dependent upon our ability to protect our proprietary technology and other intellectual property.

We rely on a combination of the protections provided by applicable patent, trademark, copyright, and trade secret laws, as well as on confidentiality procedures and other contractual arrangements, to establish and protect our rights in our technology, and related materials and information. We enter into agreements with our customers and distributors. These agreements contain confidentiality and non-disclosure provisions, a limited warranty covering our products, and indemnification for the customer from infringement actions related to our products.

Despite our efforts, it may be possible for others to copy portions of our products, reverse engineer them, or obtain and use information that we regard as proprietary, all of which could adversely affect our competitive position. Furthermore, there can be no assurance that our competitors will not independently develop technology similar to ours. The laws of certain countries in which we manufacture do not protect our intellectual property (“IP”) rights to the same extent as the laws of the United States. In the Office of the United States Trade Representative (“USTR”) annual “Special 301” Report released in April 2021, the adequacy and effectiveness of intellectual property protection in a number of foreign countries were analyzed.

A number of countries in which we manufacture or do business in are identified in the report as being on the Priority Watch List or the Watch List. In China, for instance, the USTR is concerned about the urgent need to remediate a range of IP-related concerns, including trade secret theft, online piracy and counterfeiting, the high-volume manufacture and export of counterfeit goods, technology transfer requirements imposed as a condition to access the Chinese market, the mandatory application of adverse terms to foreign IP licensors, and IP ownership and research and development localization requirements. Structural impediments to administrative, civil, and criminal IP enforcement are also problematic. The USTR also expressed concern that in India there is a lack of sufficient measurable improvements to its IP framework on long-standing and new challenges that have negatively affected U.S. right holders over the past year. Other countries in which we do business were also identified because of problems in intellectual property enforcement. The absence of harmonized intellectual property protection laws and effective enforcement makes it difficult to ensure consistent respect for patent, trade secret, and other intellectual property rights on a worldwide basis. As a result, it is possible that we will not be able to enforce our rights against third parties that misappropriate our proprietary technology in those countries.

The success of our business is highly dependent on maintenance of intellectual property rights.

The unauthorized use of our IP rights may increase the cost of protecting these rights or reduce our revenues. We seek to protect trade secrets and our other proprietary technology, in part, by requiring each of our employees to enter into non-disclosure and IP assignment agreements. In these agreements, the employee agrees to maintain the confidentiality of all of our proprietary information and, subject to certain exceptions, to assign to us all rights in any proprietary information or technology made, or contributed, by the employee during his or her employment. Generally, we do not enter into non-compete arrangements with our employees, with the exception of certain executives, senior managers and, in some cases, one or more of the principals of the businesses that we acquire.

All of these types of agreements may be breached or be found unenforceable (including in light of potential regulations proposed by the United States Federal Trade Commission), and we may not have an adequate remedy for any such breach of, or inability to enforce, these agreements. We may initiate, or be subject to, claims or litigation for infringement of proprietary rights, or to establish the validity of our proprietary rights, which could result in significant expense to us, cause product shipment delays, require us to enter royalty or licensing agreements, and divert the efforts of our technical and management personnel from productive tasks, whether or not such litigation were determined in our favor.

We may be exposed to product liability claims.

While our agreements with our customers and distributors typically contain provisions designed to limit our exposure to potential material product liability claims, including appropriate warranty, indemnification, damages waiver, and limitation of liability provisions, it is possible that such provisions may not be effective under the laws of some jurisdictions, thus exposing us to substantial liability. Moreover, defending a suit, regardless of its merits, could entail substantial expense, and require the

time and attention of key management personnel. If product liability claims are brought against us, the costs associated with defending such claims may adversely affect our results of operations and future cash flows.

We must expend significant resources to obtain design wins without assurance that we will be successful.

In many cases, we must initiate communication with our customers, and convince the customer that our products and systems will offer solutions for its business that are technically superior and more cost effective compared to their existing arrangements. To do so, we must often expend significant financial and human resources to develop technologically compelling products or systems with no guarantee that they will be adopted by our customers. The non-recurring engineering (“NRE”) costs for product development in these cases could be substantial, and may adversely affect our profitability if we are unable to recover these costs.

Also, customers will often require a lengthy period of on-site testing before committing to purchase a product or system, during which period we will not receive material revenue from the customer. While a design win for our products and systems may result in a long period of recurring revenue during which we hope to recover our costs, we must often internally finance our development costs over significant time periods. If our products or systems fail to gain acceptance with our customers, we will be forced to absorb any NRE costs, which could adversely affect our business if these costs are substantial.

The long development times for certain of our products and systems may result in unpredictable fluctuations in revenue and results of operations.

Our Weighing Solutions products and Measurement Systems products often have long product development cycles, both to develop the product or system and to secure customer acceptance following what may be a lengthy on-site testing period. During product development and testing, we may incur substantial costs without corresponding revenues. If our custom product or system is ultimately accepted by the customer, we may then begin to realize substantial revenues from our development efforts.

In particular, our Measurement Systems business segment which produces highly specialized systems, can be priced for several hundred thousand dollars per unit, so that a contract to acquire one or more units can materially contribute to our revenues during the period or periods that we are permitted to recognize the contract revenues for accounting purposes. The nature of our measurement systems business segments, and in particular, the products and systems manufactured for the steel industry, may therefore result in substantial fluctuations in our operating results, including revenues and profitability, from period to period, even though there has been no fundamental change in our business or its prospects. Further, customers may request a delay in shipping a product they have ordered due to changes in their business needs, which may delay the revenue recognition for the product until shipment occurs. This may make it difficult for investors to undertake period-to-period comparisons of our performance. Also, the fluctuating nature of key components of our revenues may limit the visibility of our management regarding performance in future periods, and make it more difficult for our management to provide guidance to our investors.

We may not have adequate manufacturing capacity to satisfy future increases in demand for our products.

Our business is cyclical and in periods of a rising economy, we may experience intense demand for our products. During such periods, we may have difficulty expanding our manufacturing capacity to satisfy demand. Factors which could limit such expansion include delays in procurement of manufacturing equipment, shortages of skilled personnel, and physical constraints on expansion at our facilities. If we are unable to meet our customers’ requirements and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our financial condition and results of operations. Also, capacity that we add during upturns in the business cycle may result in excess capacity during periods when demand for our products recedes, resulting in inefficient use of capital, adversely affecting our business.

The nature of the market for our products may render them particularly susceptible to downturns in the economic environment.

Our products are designed to replace and provide superior functionality over existing product infrastructure utilized by our customers. Often, it is only after introductory demonstrations by our sales and engineering teams that our customers come to appreciate the advantages of our products and systems, and the long-term benefits of their adoption. An economic downturn or extended period of economic uncertainty may make customers less receptive to adopting new technological solutions at our suggestion - even ones with demonstrated operational and financial advantages. During these periods, customers may defer, or even cancel, orders for products and systems for which they have previously contracted, or given indications of interest.

Also, because our business is concentrated largely in the industrial sector, we do not benefit from countervailing fluctuations in consumer demand. As a result, our business may be more significantly affected by the consequences of a general economic slowdown than other segments of our industry, and may also take longer to recover from the effects of a slowdown.

Our backlog is subject to customer cancellation.

Many of the orders that comprise our backlog may be canceled by our customers without penalty. Our customers, particularly for our sensors segment products, often cancel orders when business is weak and inventories are excessive, a situation that we

have previously experienced during periods of economic slowdown. Therefore, we cannot be certain that the amount of our backlog accurately forecasts the level of orders that will ultimately be delivered. Our results of operations could be adversely impacted if customers cancel a material portion of orders in our backlog.

The complexity of our sophisticated measurement systems may require costly corrections if design flaws are found.

Our measurement systems combine sophisticated electronic hardware and computer software. We believe that the sophistication of our systems contributes to their competitive advantage over similar products offered by other system integrators. We go to substantial lengths to assure that our systems are free of design flaws when they are delivered to our customers for installation and testing. However, due to the systems' complexity, design flaws may occur and require correction. If the requisite corrections are substantial, or difficult to implement due to the systems' complexity, we may not be able to recover the costs of correction and retesting, with the result that our profit margins on these systems could be substantially reduced, or even negated by losses, and our results of operations could be materially and adversely affected.

Our results are sensitive to raw material availability, quality, and cost.

Although most materials incorporated in our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers. We generally maintain a supply of strategic raw materials for continuity and risk management. Our customers would need significant advance notification to qualify alternative materials, if we had to use them. Alternative suppliers are available worldwide for most of our raw materials, but significant time (up to 12 months) would be required to qualify new suppliers and establish efficient production scheduling.

Certain metals used in the manufacture of our products are traded on active markets, and can be subject to significant price volatility and sourcing challenges.

Our results of operations may be materially and adversely affected if we have difficulty obtaining certain raw materials, if the quality of available raw materials deteriorates, if there are significant price changes for these raw materials, or if compliance with the laws and regulations described below proves costly and time-consuming. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers, which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, since we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our net earnings. We also may need to record losses for adverse purchase commitments for these materials in periods of declining prices.

Pursuant to the SEC's "conflict minerals" rules, reporting companies that determine that certain metals, dubbed "conflict minerals" by the SEC (which include tantalum, gold, tin, and tungsten sourced from the Democratic Republic of the Congo or adjoining countries), are necessary to the functionality or production of a product they manufacture, or contract to have manufactured, must file a specialized disclosure form with the SEC. We use raw materials that are subject to conflict minerals rules. The compliance with the SEC's related disclosure requirements may affect the sourcing and availability of minerals used in the manufacture of our products. Also, because our supply chain is complex, we may face reputational challenges with our customers and other stakeholders if we are unable to materially verify the origins of all "in scope" metals used in our products.

Our product sales may be adversely affected by changes in product classification levels under various qualification and specification standards.

Certain of our products must be qualified or approved under various military and aerospace specifications and other standards. We have qualified certain of our foil resistor products under various military specifications approved and monitored by the DLA, and under certain European military specifications, and various aerospace standards approved by NASA and the ESA. Qualification and specification levels are based in part upon product failure rate. We must continuously perform tests on our products, and for products that are qualified, the results of these tests must be reported to the qualifying organization. Certain of our force sensor products are approved by the NTEP and OIML. Our on-board weighing systems must meet approved standards to make them legal-for-trade. If a product fails to meet the requirements for the applicable classification level or other approval, the product's classification or approval may be suspended or reduced to a lower level. During the time that the classification is suspended or reduced to a lower level, net revenues and earnings attributable to that product may be adversely affected.

Failure to maintain effective internal control over financial reporting could adversely affect our ability to meet our reporting requirements.

Effective internal control over financial reporting is necessary for us to provide reasonable assurance with respect to our financial reports, and to effectively prevent fraud. Internal control over financial reporting may not prevent or detect misstatements because of inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Therefore, even effective internal control over financial reporting can provide only reasonable assurance with

respect to the preparation and fair presentation of financial statements. If we cannot provide reasonable assurance with respect to our financial reports and effectively prevent fraud, our operating results could be harmed.

We are subject to costs and liabilities related to current and future environment, health and safety laws and regulations, as well as changes in the global climate, that could adversely affect our business.

Our manufacturing operations, products and packaging are subject to environmental laws, rules, regulations and standards. These laws govern air emissions, wastewater discharges, the handling, disposal, and remediation of hazardous substances, wastes, and certain chemicals used or generated in our manufacturing processes, and workplace health and safety. Compliance with these laws, rules, regulations and standards can require significant expenditure of financial and employee resources.

In addition, changes to such laws, rules, regulations, and standards are made or proposed regularly, and some of the proposals, if adopted, might, directly or indirectly, adversely affect the operating results of one or more of our operating segments. Additionally, increased regulation of emissions linked to climate change, including greenhouse gas (carbon) emissions and other climate-related regulations, could potentially increase the cost of our operations due to increased costs of compliance, increased cost of fossil fuel-based inputs and increased cost of energy intensive raw material inputs.

Federal, state, provincial, and local laws and requirements pertaining to workplace health and safety conditions are significant factors in our business. Changes to these laws and requirements may result in additional costs and actions across the affected country or region. Various government agencies may promulgate new or modified legislation, and implement special emphasis programs and enforcement actions that could impact particular Company operations.

Federal, state, provincial, foreign, and local environmental requirements relating to air, soil, and water quality, handling, discharge, storage, and disposal of a variety of substances (including per- and polyfluoroalkyl substances, or PFAS), and climate change are also significant factors in our business, and changes to such requirements generally result in an increase to our costs of operations. Although we have never been involved in any environmental matter that has had a material adverse impact on our overall operations, there can be no assurance that in connection with any past or future operation, acquisition or otherwise, we will not be obligated to address environmental matters that could have a material adverse impact on our business, financial condition, and results of operations.

The failure by us to comply with applicable environmental, health and safety requirements could result in fines, penalties, enforcement actions, third-party claims for property damage and personal injury, requirements to clean up property or to pay for the costs of cleanup, or regulatory or judicial orders requiring corrective measures, which could have a material adverse effect on our business, financial condition or results of operations. Additionally, such actions could negatively impact our reputation in the impacted geographic market and more broadly.

Our credit facilities subject us to financial and operating restrictions.

We maintain a revolving credit facility with banks that we use, or may use, for working capital, acquisition financing, and other purposes. This credit facility subjects us to certain restrictions which may affect, and in some cases significantly limit or prohibit, among other things, our ability to:

- borrow additional funds;
- pay dividends or make other distributions;
- repurchase our common stock;
- make investments, including capital expenditures;
- engage in transactions with affiliates or subsidiaries; or
- create liens on our assets.

Our credit facility requires us to maintain certain financial ratios. If we fail to comply with the covenant restrictions contained in the credit facility, that failure could result in termination of the facility, and all amounts outstanding could become immediately payable.

A significant portion of our cash and cash equivalents and short-term investments balances are held by our non-U.S. subsidiaries.

We generate a significant amount of cash and profits from our non-U.S. subsidiaries. As of December 31, 2022, 83% of our cash and cash equivalents and short-term investments were held by subsidiaries outside of the United States. Any repatriation of such funds could incur local withholding tax in the source and intervening foreign jurisdictions. These amounts could also be subject to certain U.S. state taxes.

Changes in our tax rate or exposure to additional income tax liabilities could affect our profitability. In addition, audits by tax authorities could result in additional tax payments for prior periods.

We are subject to income taxes in the U.S. and in various foreign jurisdictions. Domestic and international tax liabilities are subject to the allocation of income among various tax jurisdictions. Our effective tax rate can be affected by changes in the mix of earnings in countries with differing statutory tax rates (including as a result of business acquisitions and dispositions), changes in the valuation of deferred tax assets and liabilities, accruals related to contingent tax liabilities, the results of audits and examinations of previously filed tax returns, and changes in tax laws.

For example, in August 2022, the Inflation Reduction Act of 2022 (“IRA”) was enacted into law. The IRA includes a 15% corporate alternative minimum tax that applies to companies that have a three-year average of at least \$1 billion in adjusted profits and is effective for taxable years beginning after December 31, 2022. The IRA also includes a 1% excise tax on repurchases of stock occurring after December 31, 2022.

Any of these factors may adversely affect our tax rate and decrease our profitability. The amount of income taxes we pay is subject to audit by U.S. federal, state, local, and foreign tax authorities. If these tax audits result in assessments, our future results may be unfavorably impacted.

As a global business, we have a complex tax structure, and there is a risk that the tax authorities will disagree with our transfer pricing.

We are subject to complex transfer pricing regulations in the U.S. and foreign countries in which we operate. Transfer pricing regulations generally require that transactions between related companies be determined comparable to transactions on an arm’s length basis and that contemporaneous documentation be maintained to support the pricing used. Although transfer pricing standards are generally similar in many of the countries in which we operate, there is still a relatively high degree of uncertainty and inherent subjectivity in complying with these requirements. This topic has received additional scrutiny in recent years, including the Organization for Economic Co-operation and Development’s Base Erosion and Profit Shifting project. To the extent that any tax authority disagrees with our transfer pricing practices, we could incur significant costs to defend our position and could be subject to significant additional tax liabilities, interest, and penalties.

We may not be able to realize our deferred tax assets which would adversely impact tax expense in future periods.

We regularly assess the ability to realize deferred tax assets in each jurisdiction in which we operate based on a number of factors, including historic operating results, estimates of future earnings, the economic environment, the nature and character of the income, and the existence of cost effective tax planning strategies. This assessment requires significant judgment. If we determine that deferred tax assets are not “more likely than not” to be realized, we record a valuation allowance to reduce deferred tax assets to a level that is expected to be realized. If we subsequently determine that realization becomes “more likely than not”, a valuation allowance will be reversed. Any increase or decrease in our valuation allowances could have a significant impact on our financial results.

We use the mark Vishay under license from Vishay Intertechnology, which could result in product and market confusion.

We use the mark *Vishay* as part of our name and in connection with many of our products. Our use of the *Vishay* mark is governed by an agreement between us and Vishay Intertechnology, giving us a perpetual, royalty-free, worldwide license for the use of the mark. We believe that it is important that we continue the use of the *Vishay* name, to a certain extent, in order to benefit from the reputation of the *Vishay* brand, which was first used in connection with our foil resistors and strain gages when Vishay Intertechnology was founded over 50 years ago.

There are risks associated with our use of the *Vishay* mark, however, because both we, and Vishay Intertechnology, use the *Vishay* mark, confusion could arise in the market regarding the products offered by the two companies, and there could be a misplaced perception of our continuing to be associated with Vishay Intertechnology. Also, any negative publicity associated with one of the two companies in the future could adversely affect the public image of the other. Finally, Vishay Intertechnology will have the right to terminate the license agreement, in certain extreme circumstances, if we are in material and repeated breach of the terms of the agreement, which would likely have an adverse effect on us and our business.

Risks relating to our operations outside the United States

We attempt to improve profitability by operating in countries in which manufacturing efficiencies may be achieved, but the shift of operations to these regions may entail considerable expense.

Our strategy is aimed at achieving significant production cost savings through the transfer and expansion of manufacturing operations to and in countries in which we have existing capacity, as well as countries with lower production costs or other benefits, such as India. During this process, we may experience under-utilization of certain plants and factories in higher-cost regions, and capacity constraints in plants and factories located in lower-cost regions. Also, we may experience delays in the expected transition from a higher-cost location to a lower-cost one that results in greater than expected use of the higher-cost

facility. This transitional utilization may result initially in production inefficiencies and higher costs. These costs include those associated with compensation in connection with workforce reductions and plant closings in the higher-cost regions, start-up expenses, manufacturing and construction delays, and increased depreciation costs in connection with the initiation or expansion of production in lower-cost regions. In addition, as we implement transfers of certain of our operations, we may experience strikes or other types of labor unrest as a result of layoffs or termination of our employees in higher-cost countries.

In connection with the transfer of manufacturing operations to lower-cost countries, and upgrading of existing facilities in higher-cost countries, we are also increasing the level of automation in our plants to optimize our capital and labor resources in production, inventory management, quality control, and warehousing. Although we have substantial experience with automation in several of our plants in higher-cost countries, there are risks in automating plants which previously did not use a significant amount of automation, including the possibility of inefficiencies and higher operating costs in the transition from manual to automated operations. If the transition extends longer than anticipated, we could suffer product yield inefficiencies, contributing to higher product costs and increasing the time it will take for us to achieve a return on our investment in the capital equipment involved in the automation process. Furthermore, any layoffs or termination of our employees as a result of increased automation may lead to strikes or other types of labor unrest. If we experience these types of inefficiencies, they could have an adverse effect on our operating results, customer relationships, and financial condition.

Current and future tariffs, trade regulation or other restrictions may adversely impact our business, financial condition and results of operations.

We have manufacturing operations in China, Europe, Canada, Israel and the United States, as well as in other countries. Significant tariffs or other restrictions which are placed on Chinese, European, Canadian or Israeli imports to the United States, or any related counter-measures which are taken by the countries involved, may materially harm our revenues and results of operations.

Tariffs, or other changes in U.S. trade policy, could trigger retaliatory actions by affected countries. Certain foreign governments have instituted or are considering imposing trade sanctions on certain U.S. goods. We cannot predict future trade policy or the terms of any renegotiated trade agreements and their impacts on our business. The adoption and expansion of trade restrictions, the occurrence of a trade war, or other governmental actions related to tariffs, quotas, duties, taxes or trade agreements or policies has the potential to adversely impact demand for our products, our costs, our customers, and our suppliers, which in turn could adversely impact our business, financial condition and results of operations.

We are subject to the risks of political, economic, health, and military instability in countries outside the United States in which we operate.

Some of our products are produced in Israel, India, China, and other countries which are particularly subject to risks of political, economic, health and military instability. This instability could result in wars, riots, nationalization of industry, currency fluctuations, and labor unrest or unavailability. These conditions could have an adverse impact on our ability to manufacture, ship and operate in these regions and, depending on the extent and severity of these conditions, could result in a reduction in customer orders and sales to certain regions and end-markets and materially and adversely affect our overall financial condition and operating results.

We have principal manufacturing facilities and operations located in Israel. Accordingly, our business will be directly influenced by the political, economic and military conditions affecting Israel at any given time. Since the establishment of the State of Israel in 1948, a number of armed conflicts have occurred between Israel and its neighboring countries. We have never experienced any material interruption in our operations attributable to these factors, in spite of several Middle East crises, including wars. A change in the security and political situation in Israel and in the economy could have a material adverse effect on our business, operating results and financial condition.

We are subject to foreign currency exchange rate risks which may impact our results of operations.

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries.

Our significant foreign subsidiaries are located in the United Kingdom, Canada, Germany, Israel, Japan, and India. Our operations in Europe, Canada and certain locations in Asia primarily generate and expend cash in local currencies. Our operations in Israel and certain locations in Asia primarily generate cash in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency exchange rate risk is more pronounced in situations such as our operations in Canada, India, Israel, and China - where costs, such as production labor costs are predominantly paid in local currencies while the sales revenue for those products is predominantly denominated in U.S. dollars.

As of December 31, 2022, we did not have in place any arrangements to mitigate or hedge against exposures relating to fluctuations in foreign currency exchange rate.

A change in the mix of the currencies in which we transact our business could have a material effect on results of operations. Furthermore, the timing of cash receipts and disbursements could have a material effect on our results of operations, particularly if there are significant changes in exchange rates in a short period of time.

Our global operations are subject to extensive anti-corruption laws and other regulations.

The U.S. Foreign Corrupt Practices Act, U.K. Bribery Act and similar foreign anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence foreign government officials for the purpose of obtaining or retaining business, or obtaining an unfair advantage. Recent years have seen a substantial increase in the global enforcement of anti-corruption laws. Our continued operation and expansion outside the United States, including in developing countries, could increase the risk of such violations. Despite meaningful measures that we undertake to facilitate lawful conduct, these measures may not always prevent reckless or criminal acts by our employees or agents. Any such improper actions could damage our reputation and subject us to civil or criminal investigation in the United States and in other jurisdictions, could lead to substantial civil and criminal, monetary and non-monetary penalties and could cause us to incur significant legal and investigative fees.

Our business and results of operations may be materially adversely affected by compliance with import and export laws.

We must comply with various laws and regulations relating to the import and export of products, services and technology from the U.S. and other countries having jurisdiction over our operations, which may affect our transactions with certain customers, business partners and other persons. In certain circumstances, export control and economic sanctions regulations may prohibit the export of certain products, services, and technologies and in other circumstances, we may be required to obtain an export license before exporting a controlled item. The length of time required by the licensing processes can vary, potentially delaying the shipment of products or performance of services and the recognition of the corresponding revenue. In addition, failure to comply with any of these regulations could result in substantial civil and criminal, monetary and non-monetary penalties, disruptions to our business, limitations on our ability to import and export products and services and damage to our reputation. In 2022, we determined that certain export shipments of products from one of our subsidiaries did not comply with the filing requirements of U.S. export administration and foreign trade regulations, and we voluntarily self-disclosed such non-compliance to the U.S. federal government. While non-compliance with such filing requirements could result in fines and penalties, we do not believe that the foregoing matters will have a material adverse effect on our business or results of operations, cash flows or financial condition. Moreover, any changes in export control or sanctions regulations may further restrict the export of our products or services, and the possibility of such changes requires constant monitoring to ensure we remain compliant. Any restrictions on the export of our products or product lines could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

Risks Relating to Our Common Stock

The holders of Class B convertible common stock have effective voting control of our company.

We have two classes of common stock: common stock and Class B convertible common stock. The holders of common stock are entitled to one vote for each share held, while the holders of Class B convertible common stock are entitled to 10 votes for each share held. The ownership of Class B convertible common stock is highly concentrated, and holders of Class B convertible common stock effectively can cause the election of directors and the approval or disapproval of other matters requiring stockholder approval. Mrs. Ruta Zandman, the widow of the late founder of our technology, Dr. Felix Zandman, controls the voting of, solely or on a shared basis with Marc Zandman (Dr. Felix Zandman's son and a member of our Board of Directors) and Ziv Shoshani (Mrs. Ruta Zandman's nephew and our Chief Executive Officer and a member of our Board of Directors), approximately 76.9% of our Class B convertible common stock, representing 34.5% of the total voting power of our capital stock as of December 31, 2022. Holders of our Class B convertible common stock may act in ways that are contrary to, or not in the best interests of, holders of our common stock. The voting rights of the holders of our Class B convertible common stock effectively give such holders the ability to prevent transactions that would result in a change in control of us, including transactions in which holders of our common stock might otherwise receive a premium for their shares over the then-current market price.

Certain provisions of our certificate of incorporation and bylaws may reduce the likelihood of any unsolicited acquisition proposal or potential change of control that you might consider favorable.

Our bylaws contain provisions that could be considered “anti-takeover” provisions because they make it harder for a third party to acquire us without the consent of our incumbent board of directors. Under these by-law provisions:

- stockholders may not change the size of the board of directors or, except in limited circumstances, fill vacancies on the board of directors;
- stockholders may not call special meetings of stockholders;
- stockholders must comply with advance notice provisions for nominating directors or presenting other proposals at stockholder meetings; and
- our Board of Directors, may without stockholder approval, issue preferred shares and determine their rights and terms, including voting rights, or adopt a stockholder rights plan.

These provisions could have the effect of discouraging an unsolicited acquisition proposal or delaying, deferring, or preventing a change of control transaction that might involve a premium price or otherwise be considered favorable by our stockholders.

General Risk Factors

Difficult and volatile conditions in the capital, credit and commodities markets and in the overall economy could adversely affect our financial position, results of operations and cash flows.

Our financial position, results of operations and cash flows could be adversely affected by difficult conditions and significant volatility in the capital, credit and commodities markets and in the overall worldwide economy. Disruptions in supply chains, inflation, and rising interest rates have a negative effect on economies and the performance of stock markets. Any uncertainty about the federal budget or the debt limit in the United States could have a negative effect on the United States and global economy. The impact that these factors might have on us and our business is uncertain and cannot be estimated at this time. The difficult conditions in these markets and the overall economy affect our business in a number of ways. For example:

- Although we believe we have sufficient liquidity to run our business, under extreme market conditions, there can be no assurance that financing, if needed, would be available or sufficient, and, in such a case, we may not be able to successfully obtain financing on favorable terms, or at all.
- Continuing market volatility can exert downward pressure on our stock price, which could make it more difficult or unfavorable for us to raise additional capital in the future.
- Economic conditions could result in customers in our markets experiencing financial difficulties, including limited liquidity and their inability to obtain financing or electing to limit spending because of the economy which may result, for example, in customers' inability to pay us at all or on a timely basis.

We might require additional capital to support business growth and this capital might not be available.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges or opportunities, including the need to develop new offerings or enhance our existing offerings, enhance our operating infrastructure, or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our common stock. Any debt financing secured by us in the future could involve additional restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions.

In addition, obtaining financing may be adversely affected by rising interest rates or other factors. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us, when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

Our future success is substantially dependent on our ability to attract and retain highly qualified technical, managerial, marketing, finance, and administrative personnel.

The competitive environment of our business requires us to attract and retain highly qualified personnel to develop technological innovations and bring them to market on a timely basis. Our complex operations also require us to attract and retain highly qualified administrative personnel in functions such as legal, tax, accounting, business development, financial reporting, and treasury. The market for personnel with such qualifications is highly competitive. We have not entered into employment or non-competition agreements with many of our key personnel.

The loss of the services of, or the failure to effectively recruit, qualified personnel, including for key executive positions, could have a material adverse effect on our business.

We are exposed to, and may be adversely affected by, interruptions to our computer and information technology systems and sophisticated cyber-attacks.

We rely on our information technology systems and networks in connection with many of our business activities. Some of these networks and systems are managed by third party service providers and are not under our direct control. Our operations routinely involve receiving, storing, processing, and transmitting sensitive information pertaining to our business, customers, suppliers, employees, and other sensitive matters. Any cyber incidents could materially disrupt operational systems; result in

loss of trade secrets or other proprietary or competitively sensitive information; compromise personally identifiable information regarding customers or employees; and jeopardize the security of our facilities. Because techniques used to obtain unauthorized access, or to sabotage systems, change frequently and generally are not recognized until they are launched against a target, we may be unable to anticipate these techniques, or to implement adequate preventative measures. Information technology security threats, including security breaches, computer malware, and other cyber-attacks are increasing in both frequency and sophistication, and could create financial liability, subject us to legal or regulatory sanctions, or damage our reputation with customers, suppliers, and other stakeholders. We continuously seek to maintain a robust program of information security and controls, but the impact of a material information technology event could have a material adverse effect on our competitive position, reputation, results of operations, financial condition, and cash flows.

Interruptions in our information technology systems could adversely affect our business.

We rely on the efficient and uninterrupted operation of complex information technology systems and networks to operate our business. Any significant system or network disruption, including, but not limited to, new system implementations, computer viruses, security breaches, facility issues or energy blackouts could have a material adverse impact on our operations and results of operations. Such network disruption could result in a loss of the confidentiality of our intellectual property or the release of sensitive competitive information or customer or employee personal data. Any loss of such information could harm our competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by the disruptions or security breaches. We have implemented protective measures to prevent against and limit the effects of system or network disruptions, but there can be no assurance that such measures will be sufficient to prevent or limit the damage from any future disruptions and any such disruption could have a material adverse impact on our business and results of operations.

Third-party service providers, such as subcontractors, distributors and vendors have access to certain portions of our sensitive data. In the event that these service providers do not properly safeguard our data that they hold, security breaches and loss of our data could result. Any such loss of data by our third-party service providers could have a material adverse impact on our business and results of operations.

Unexpected events, such as a natural disaster, could disrupt our operations and adversely affect our results of operations.

We have manufacturing and other facilities in countries around the world. Unexpected events, including fires or explosions at facilities; natural disasters, such as flooding, hurricanes, and earthquakes; war or terrorist activities; civil unrest; unplanned outages; supply or labor disruptions; and failures of equipment or systems at any of our facilities could adversely affect our results of operation. If adverse conditions were to arise with respect to any of our facilities as a result of a natural disaster or other unexpected event, they may result in customer disruption, physical damage to one or more key operating facilities, the temporary closure of one or more key operating facilities, the temporary disruptions of information systems, and/or an adverse effect on our results of operations.

Our stock price could become more volatile and investments could lose value.

The market price of our common stock, and the number of shares traded each day, has experienced significant fluctuations and may continue to fluctuate significantly. The market price for our common stock may be affected by a number of factors, including, but not limited to:

- shortfalls in our expected net revenue, earnings or key performance metrics;
- changes in recommendations or estimates by securities analysts;
- the announcement of new products by us or our competitors;
- quarterly variations in our or our competitors' results of operations;
- a change in our dividend or stock repurchase activities;
- developments in our industry or changes in the market for technology stocks;
- changes in rules or regulations applicable to our business; and
- other factors, including economic instability, inflation, COVID-19, labor shortages, supply chain disruptions and changes in political or market conditions.

A significant drop in our stock price could expose us to costly and time consuming litigation, which could result in substantial costs, and divert management's attention and resources, resulting in an adverse effect on our business.

Also, given our market capitalization and trading volume fluctuations, it is possible that there will be less market and institutional interest in our shares, and that we will not attract substantial coverage in the analyst community. As a result, the trading market for our shares may be less liquid, making it more difficult for investors to dispose of their shares at favorable prices, and investors may have less independent information and analysis available to them concerning our company.

Your percentage ownership of our common stock may be diluted in the future.

Your percentage ownership of our common stock may be diluted in the future because of equity awards that we expect will be granted to our directors, officers, and employees. The Vishay Precision Group, Inc. 2022 Stock Incentive Program, as may be amended from time to time, provides for the grant of equity-based awards, including restricted stock, restricted stock units, stock options, and other equity-based awards to our directors, officers, and other employees, advisors and consultants.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

As of December 31, 2022, our major facilities consisted of:

Approx. Available Space (square feet)	<u>United States</u>	<u>Other Countries</u>	<u>Total</u>
Owned facilities	226,000	369,000	595,000
Leased facilities	73,000	272,400	345,400
Total facilities	299,000	641,400	940,400

Our leased facility in Modi'in Israel represents approximately 45% of the total leased square footage in Other Countries.

Our corporate headquarters are located at 3 Great Valley Parkway, Suite 150, Malvern, PA 19355.

In the opinion of management, our properties and equipment generally are in good operating condition and are adequate for our present needs. We do not anticipate difficulty in renewing leases as they expire, or in finding alternative facilities.

Item 3. LEGAL PROCEEDINGS

The Company is subject to various legal proceedings that constitute ordinary, routine litigation incidental to its business. The Company believes that the foregoing matters will not have a material adverse effect on the Company's business or its financial condition, results of operations, and cash flows.

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

Our common stock is listed on the New York Stock Exchange under the symbol VPG. The Board of Directors may only declare dividends or other distributions with respect to the common stock or the Class B convertible common stock if it grants such dividends or distributions in the same amount, per share, with respect to the other class of stock. Stock dividends or distributions, on any class of stock, are payable only in shares of stock of that class. Shares of either common stock or Class B convertible common stock cannot be split, divided, or combined unless the other is also split, divided, or combined equally. Holders of record of our common stock totaled approximately 676 at March 1, 2023.

We have two classes of common stock: common stock and Class B convertible common stock. The holders of common stock are entitled to one vote for each share held, while the holders of Class B convertible common stock are entitled to 10 votes for each share held. At March 1, 2023 we had outstanding 1,022,887 shares of Class B convertible common stock, par value \$0.10 per share. Currently, the holders of VPG's Class B convertible common stock hold approximately 45.0% of the voting power of our Company. Mrs. Ruta Zandman, the widow of the late founder of our technology, Dr. Felix Zandman, controls the voting of, solely or on a shared basis with Marc Zandman (Dr. Felix Zandman's son and a member of our Board of Directors) and Ziv Shoshani (Mrs. Ruta Zandman's nephew, our Chief Executive Officer and a member of our Board of Directors), approximately 76.9% of our Class B convertible common stock, representing 34.5% of the total voting power of our capital stock as of December 31, 2022.

The following table provides information about repurchases of the Company's common stock during the three-month period ended December 31, 2022

	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans (a)
October 2, 2022 to November 2, 2022	43,949	\$ 31.67	43,949	523,450
November 3, 2022 to December 3, 2022	8,663	\$ 33.08	8,663	514,787
December 4, 2022 to December 31, 2022	—	\$ —	—	—
Total	52,612		52,612	514,787

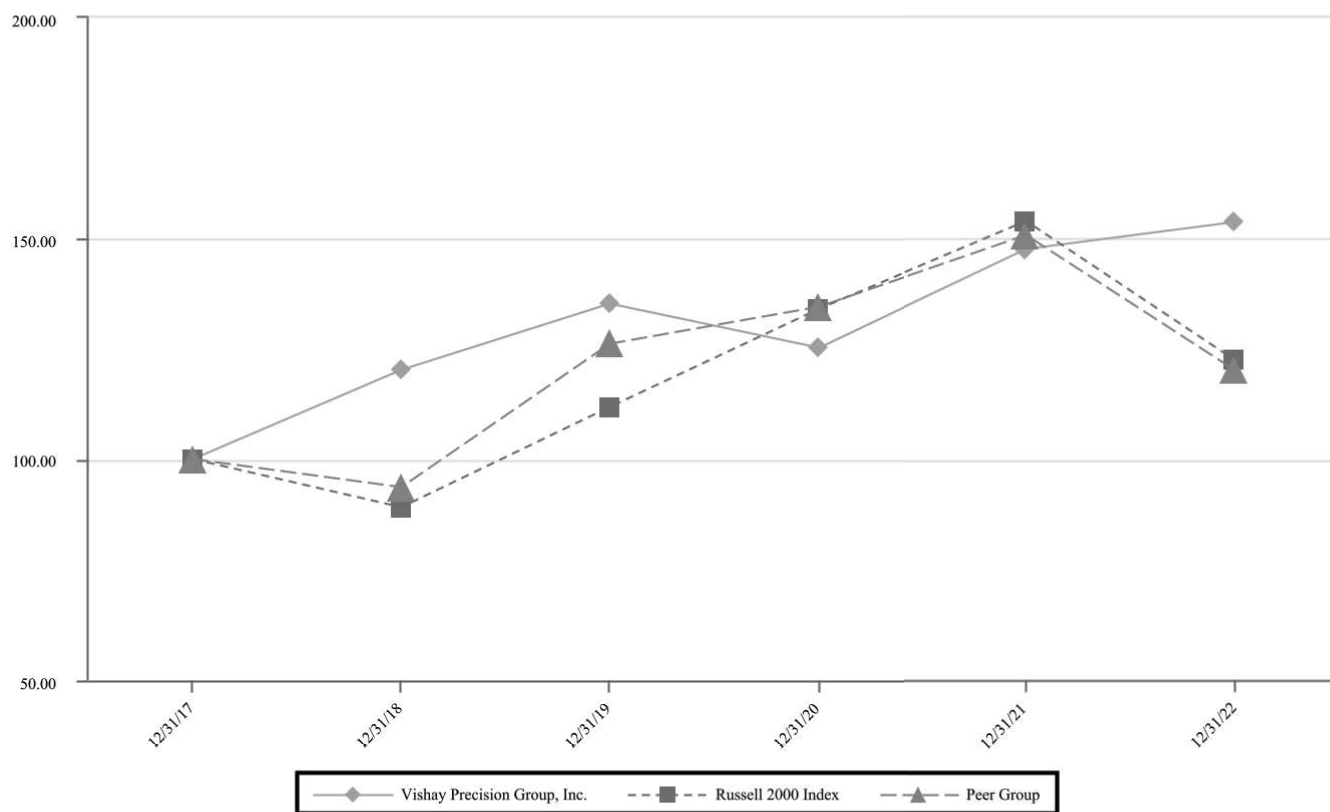
(a) On August 8, 2022, the Board of Directors of the Company authorized the repurchase of up to 600,000 shares of the Company's outstanding common stock (the "Stock Repurchase Plan"). The Stock Repurchase Plan will expire on August 11, 2023, and the Board of Directors authorized purchases thereunder to be made through an issuer repurchase plan adopted under Rule 10b5-1 of the Exchange Act, open market purchases or private transactions, in accordance with the applicable federal securities laws, including Rule 10b-18 under the Exchange Act. As of December 31, 2022, the Company had repurchased 85,213 shares under the Stock Repurchase Plan.

Stock Performance Graph

The graph and table below compare the cumulative total stockholder return on the Company's common stock over a sixty month period, with the returns on the Russell 2000 Stock Index, and a peer group of companies selected by our management. The peer group is made up of eight publicly held manufacturers of sensors, sensor-based equipment, and sensor-based systems. Management believes that the product offerings of the peer group companies are more similar to our product offerings than those of the companies contained in any published industry index. The return of each new peer issuer has been weighted according to the respective issuer's stock market capitalization. The graph and table assume that \$100 had been invested at December 31, 2017, and that all dividends were reinvested. The graph and table are not necessarily indicative of future investment performance.

		12/31/17	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Vishay Precision Group, Inc.	Cumulative \$	100.00	120.20	135.19	125.17	147.60	153.66
Russell 2000 Index	Cumulative \$	100.00	88.99	111.70	134.00	153.85	122.41
Peer Group	Cumulative \$	100.00	93.68	125.94	134.35	150.74	120.02

Comparison of Cumulative Total Return
Assumes Initial Investment of \$100
December 2022



*The management selected peer group includes: CTS Corp., Luna Innovations Inc., inTEST Corporation, Kyowa, Spectris plc, TT Electronics, FARO Technologies Inc., ESCO Technologies Inc.

Item 6. [Reserved]

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

Overview

VPG is a global, diversified company focused on precision measurement and sensing technologies that help power the future by bridging the physical world with the digital one. Many of our specialized sensors, weighing solutions, and measurement systems are “designed-in” by our customers, and address growing applications across a diverse array of industries and markets. Our products are marketed under brand names that we believe are characterized as having a very high level of precision and quality, and we employ an operationally diversified structure to manage our businesses.

Driven by the continued proliferation of data generated by the expanding use of sensors across a widening array of industrial and non-industrial applications, precision measurement and sensing technologies help ensure and deliver required levels of quality of mission-critical or high-value data. VPG's products are often at the first stage of a data value chain (i.e., the process of converting the physical world into a digital format that can be used for a specific purpose) and as such impact the effectiveness of vast number of critical, high-value downstream processes. Over the past few years, we have seen a broadening of precision sensing applications in both our traditional industrial markets and new markets, due to the development of higher functionality in our customers' end products. Our precision measurement solutions are used across a wide variety of end markets upon which we focus, including industrial, test and measurement, transportation, steel, medical, agriculture, avionics, military and space, and consumer product applications. The Company has a long heritage of innovation in sensor technologies that provide accuracy, reliability and repeatability that make our customers' products safer, smarter, and more productive. As the functionality of customers products continues to increase, and they integrate more precision measurement sensors and related systems into their solutions, we believe this will offer substantial growth opportunities for our products and expertise.

Overview of Financial Results

VPG reports in three product segments: Sensors segment, Weighing Solutions segment, and Measurement Systems segment. The Sensors reporting segment is comprised of the foil resistor and strain gage operating segments. The Weighing Solutions segment is comprised of specialized modules and systems used to precisely measure weight, force torque, and pressure. The Measurement Systems reporting segment is comprised of highly specialized systems for steel production, materials development, and safety testing.

Net revenues for the year ended December 31, 2022 were \$362.6 million compared to net revenues of \$317.9 million for the year ended December 31, 2021. Net earnings attributable to VPG stockholders for the year ended December 31, 2022 were \$36.1 million, or \$2.63 per diluted share, compared to \$20.2 million, or \$1.48 per diluted share, for the year ended December 31, 2021.

The results of operations for the years ended December 31, 2022 and 2021 include items affecting comparability as listed in the reconciliations below. The reconciliations below include certain financial measures which are not recognized in accordance with U.S. generally accepted accounting principles ("GAAP"), including adjusted gross profits, adjusted gross profit margin, adjusted operating income, adjusted operating margin, adjusted net earnings, adjusted net earnings per diluted share, EBITDA, and adjusted EBITDA. These non-GAAP measures should not be viewed as an alternative to GAAP measures of performance. Non-GAAP measures such as adjusted gross profits, adjusted gross profit margin, adjusted operating income, adjusted operating margin, adjusted net earnings, adjusted net earnings per diluted share, EBITDA, and adjusted EBITDA do not have uniform definitions. These measures, as calculated by VPG, may not be comparable to similarly titled measures used by other companies. Management believes that these non-GAAP measures are useful to investors because each presents what management views as our core operating results for the relevant period. The adjustments to the applicable GAAP measures relate to occurrences or events that are outside of our core operations, and management believes that the use of these non-GAAP measures provides a consistent basis to evaluate our operating profitability and performance trends across comparable periods. In addition, the Company has historically provided these or similar non-GAAP measures and understands that some investors and financial analysts find this information helpful in analyzing the Company's performance and in comparing the Company's financial performance to that of its peer companies and competitors. Management believes that the Company's non-GAAP measures are regarded as supplemental to its GAAP financial results.

The items affecting comparability are (dollars in thousands, except per share amounts):

Fiscal Year Ended December 31,	Gross Profit		Operating Income		Net Earnings Attributable to VPG Stockholders		Diluted Earnings Per share	
	2022	2021	2022	2021	2022	2021	2022	2021
As reported - GAAP	149,602	125,142	43,799	27,372	\$ 36,063	\$ 20,221	\$ 2.63	\$ 1.48
As reported - GAAP Margins	41.3 %	39.4 %	12.1 %	8.6 %	—	—	—	—
Acquisition purchase accounting adjustments ^(a)	1,550	2,775	1,550	2,775	1,550	2,775	0.11	0.20
Acquisition costs ^(b)	—	—	—	1,198	—	1,198	—	0.09
COVID-19 impact ^(c)	138	(66)	138	(574)	138	(574)	0.01	(0.04)
Start-up costs ^(d)	150	3,174	150	3,174	150	3,174	0.01	0.23
Impairment of goodwill and indefinite-lived intangibles	—	—	—	1,223	—	1,223	—	0.09
Restructuring costs	—	—	1,518	76	1,518	76	0.11	0.01
Foreign exchange (gain)/loss ^(e)	—	—	—	—	(3,579)	109	(0.26)	0.01
Less: Tax effect of reconciling items and discrete tax items ^(f)	—	—	—	—	(44)	2,596	(0.01)	0.20
As Adjusted - Non GAAP	<u>\$151,440</u>	<u>\$131,025</u>	<u>\$ 47,155</u>	<u>\$ 35,244</u>	<u>\$ 35,884</u>	<u>\$ 25,606</u>	<u>\$ 2.62</u>	<u>\$ 1.87</u>
As Adjusted - Non GAAP Margins	41.8 %	41.2 %	13.0 %	11.1 %				

	Year ended	
	December 31, 2022	December 31, 2021
Net earnings attributable to VPG stockholders	\$ 36,063	\$ 20,221
Interest Expense	2,269	1,230
Income tax expense	8,535	5,469
Depreciation	11,504	11,684
Amortization	3,849	3,312
EBITDA	\$ 62,220	\$ 41,916
EBITDA MARGIN	17.2 %	13.2 %
Impairment of goodwill and indefinite-lived intangibles	—	1,223
Acquisition purchase accounting adjustments (a)	1,550	2,775
Acquisition costs (b)	—	1,198
Restructuring costs	1,518	76
COVID-19 impact (c)	138	(574)
Start-up costs (d)	150	3,174
Foreign exchange (gain) loss (e)	(3,579)	109
ADJUSTED EBITDA	61,997	49,897
ADJUSTED EBITDA MARGIN	17.1 %	15.7 %

- (a) Acquisition purchase accounting adjustments include fair market value adjustments associated with inventory recorded as a component of costs of products sold.
- (b) Acquisition costs associated with the acquisition of DTS in 2021.
- (c) COVID-19 impact is the net impact to the Company of costs incurred as a result of the COVID-19 pandemic, net of government subsidies received.
- (d) Start-up costs in 2022 and 2021 are associated with the ramp up of our new manufacturing facility in Israel.
- (e) Impact of foreign currency exchange rates on assets and liabilities.
- (f) Included in the discrete items for 2021 is a \$1.6 million tax benefit related to the acquisition of DTS.

Financial Metrics

We utilize several financial measures and metrics to evaluate the performance and assess the future direction of our business. These key financial measures and metrics include net revenues, gross profit margin, end-of-period backlog, book-to-bill ratio, and inventory turnover.

Gross profit margin is gross profit shown as a percentage of net revenues. Gross profit is generally net revenues less costs of products sold, but could also include certain other period costs. Gross profit margin is clearly a function of net revenues, but also reflects our cost-cutting programs and our ability to contain fixed costs.

End-of-period backlog is one indicator of potential future sales. We include in our backlog only open orders that have been released by the customer for shipment in the next twelve months. If demand falls below customers' forecasts, or if customers do not control their inventory effectively, they may cancel or reschedule the shipments that are included in our backlog, in many instances without the payment of any penalty. Therefore, the backlog is not necessarily indicative of the results to be expected for future periods.

Another important indicator of demand in our industry is the book-to-bill ratio, which is the ratio of the amount of product ordered during a period compared with the product that we ship during that period. A book-to-bill ratio that is greater than one indicates that demand is higher than current revenues and manufacturing capacities, and it indicates that we may generate increasing revenues in future periods. Conversely, a book-to-bill ratio that is less than one is an indicator of lower demand compared to existing revenues and current capacities and may foretell declining sales.

We focus on our inventory turnover as a measure of how well we are managing our inventory. We define inventory turnover for a financial reporting period as our costs of products sold for the four fiscal quarters ending on the last day of the reporting period divided by our average inventory (computed using each quarter-end balance) for this same period. A higher level of inventory turnover reflects more efficient use of our capital.

The quarter-to-quarter trends in these financial metrics can also be an important indicator of the likely direction of our business. The following table shows net revenues, gross profit margin, the end-of-period backlog, the book-to-bill ratio, and the inventory turnover for our business as a whole during the five quarters beginning with the fourth quarter of 2021 and through the fourth quarter of 2022 (*dollars in thousands*):

	4th Quarter 2021	1st Quarter 2022	2nd Quarter 2022	3rd Quarter 2022	4th Quarter 2022
Net revenues	\$ 90,017	\$ 87,665	\$ 88,618	\$ 90,057	\$ 96,240
Gross profit margin	38.7 %	40.2 %	42.1 %	41.4 %	41.2 %
End-of-period backlog	\$ 150,500	\$ 170,600	\$ 171,400	\$ 171,700	\$ 155,000
Book-to-bill ratio	1.06	1.25	1.08	1.08	0.76
Inventory turnover	2.82	2.69	2.52	2.47	2.63

	4th Quarter 2021	1st Quarter 2022	2nd Quarter 2022	3rd Quarter 2022	4th Quarter 2022
<u><i>Sensors</i></u>					
Net revenues	\$ 34,149	\$ 37,750	\$ 40,280	\$ 37,879	\$ 36,312
Gross profit margin	32.1 %	37.8 %	44.3 %	40.5 %	37.6 %
End-of-period backlog	\$ 72,900	\$ 81,300	\$ 84,200	\$ 80,600	\$ 75,900
Book-to-bill ratio	1.11	1.27	1.17	0.99	0.76
Inventory turnover	3.53	3.54	3.20	3.04	2.91
<u><i>Weighing Solutions</i></u>					
Net revenues	\$ 32,071	\$ 32,768	\$ 28,459	\$ 31,399	\$ 33,089
Gross profit margin	34.0 %	36.9 %	33.7 %	33.3 %	33.4 %
End-of-period backlog	\$ 41,800	\$ 43,600	\$ 43,000	\$ 43,000	\$ 38,300
Book-to-bill ratio	0.98	1.06	1.03	1.05	0.82
Inventory turnover	2.63	2.61	2.33	2.48	2.72
<u><i>Measurement Systems</i></u>					
Net revenues	\$ 23,797	\$ 17,147	\$ 19,879	\$ 20,779	\$ 26,839
Gross profit margin	54.7 %	51.8 %	49.9 %	55.5 %	55.9 %
End-of-period backlog	\$ 35,800	\$ 45,700	\$ 44,200	\$ 48,100	\$ 40,800
Book-to-bill ratio	1.08	1.56	0.98	1.27	0.70
Inventory turnover	2.18	1.68	1.90	1.68	2.11

Net revenues for the fourth quarter of 2022 increased 6.9% from the net revenues of \$90.1 million reported in the third quarter of 2022, and increased 6.9% from \$90.0 million for the comparable prior year period.

Net revenues in the Sensors segment of \$36.3 million in the fourth quarter of 2022 decreased 4.1% from \$37.9 million in the third quarter of 2022, and increased 6.3% from \$34.1 million in the fourth quarter of 2021. Sequentially, the decrease in revenues reflected lower precision resistor sales in the Test and Measurement market which was partially offset by an increase in the Avionics, Military and Space (AMS) market, and a decrease in sales of our advanced sensors, primarily in our consumer electronics market. The year-over-year increase in revenues was primarily attributable to an increase in sales of precision resistors in the Test and Measurement market, and higher sales of our advance sensors products primarily in the AMS market and General Industrial markets.

Net revenues in the Weighing Solutions segment of \$33.1 million in the fourth quarter of 2022 increased 5.4% compared to revenues of \$31.4 million in the third quarter of 2022. The sequential increase in revenues was primarily attributable to increased revenues from OEM customers for precision agriculture and construction applications in our Other market segment and higher revenue in our Industrial Weighing market, partially offset by lower sales in the Transportation market. Net revenues in the fourth quarter of 2022 increased 3.2% compared to \$32.1 million in the fourth quarter of 2021 mainly due to increased revenues from OEM customers for precision agriculture applications in our Other market segment.

Net revenues in the Measurement Systems segment of \$26.8 million in the fourth quarter of 2022 increased 29.2% from \$20.8 million in the third quarter of 2022 and increased 12.8% from \$23.8 million in the fourth quarter of 2021. The sequential increase in revenue was primarily attributable to higher sales of Diversified Technical Systems, Inc. ("DTS") products to the Transportation and AMS markets and higher sales of KELK and Dynamic Systems Inc. ("DSI") to Steel markets. The year-over-year increase in revenues was primarily attributable to higher sales of DTS products to the AMS and Transportation markets, and higher KELK and DSI steel-related sales.

The gross profit margin for the fourth quarter of 2022 decreased 0.2% compared to the third quarter of 2022, and increased 2.5% from the fourth quarter of 2021.

Sequentially, gross profit margins decreased in the Sensors segment, were flat in the Weighing Solutions segment, and improved in the Measurement Systems segments. The decrease in the Sensors segment gross profit margin was primarily due to a decrease in volume and temporary manufacturing inefficiencies. In the Weighing Solutions segment, gross profit margin was flat as higher volume was offset by unfavorable foreign currency exchange rates. In the Measurement Systems segment, gross profit margin increased slightly reflecting higher volume which was partially offset by unfavorable product mix and foreign exchange rates.

Compared to the fourth quarter of 2021, gross profit margins increased in the Sensors and Measurement Systems segments and decreased in the Weighing Solutions segment. In the Sensors segment, the increase in gross profit margin was primarily due to an increase in volume and average selling prices. In the Measurement Systems segment, gross profit margin increased as higher revenue, higher average selling prices, and lower purchase accounting adjustments related to the DSI acquisition were partially offset by unfavorable product mix, unfavorable foreign exchange rates and higher materials costs. In the Weighing Solutions segment, the decrease in gross profit margin was primarily due to higher material costs and unfavorable foreign currency exchange rates, partially offset by higher volume and selling price increases.

Operationally Diversified

In the fourth quarter of fiscal 2021, we formally adopted an operationally diversified structure and strategy, through which each of VPG's business segments maintains and deploys distinct go-to-market strategies, technical expertise, capital requirements, and acquisition opportunities. We use an operationally diversified strategy and structure to be close to our customers and to leverage our high-level engineering expertise to optimize and enhance the performance of our customers' solutions. We seek to maximize the performance and value of our businesses by leveraging our accumulated experience, methodologies, and expertise in driving operational excellence across our functional areas, as well as in the allocation of capital and investment.

Optimize Core Competence

The Company's core competencies include our innovative deep technical and applications-specific expertise to add value to our customers' products, our strong brands and customer relationships, our focus on operational excellence, our ability to select and develop our management teams, and our proven M&A strategy. We continue to optimize all aspects of our development, manufacturing and sales processes, including by increasing our technical sales efforts; continuing to innovate in product performance and design; and refining our manufacturing processes.

Our Sensors segment research group developed innovations that enhance the capability and performance of our strain gages, while simultaneously reducing their size and power consumption as part of our advanced sensors product line. We believe this unique foil technology will create new markets as customers "design in" these next generation products in existing and new applications. Our development engineering team is also responsible for creating new processes to further automate manufacturing, and improve productivity and quality. Our advanced sensors manufacturing technology also offers us the capability to produce high-quality foil strain gages in a highly automated environment, which we believe results in reduced manufacturing and lead times, improved quality and increased margins. As a sign of our commitment to these businesses, we signed a long-term lease for a state-of-the-art facility that has been constructed in Israel. We fully transitioned to this facility in the third quarter of fiscal 2021.

Our design, research, and product development teams, in partnership with our marketing teams, drive our efforts to bring innovations to market. We intend to leverage our insights into customer demand to continually develop and roll out new, innovative products within our existing lines and to modify our existing core products in ways that make them more appealing, addressing changing customer needs and industry trends in terms of form, fit, and function.

We also seek to achieve significant production cost savings through the transfer, expansion, and construction of manufacturing operations in countries such as India, Japan, and Israel, where we can benefit from improved efficiencies or available tax and other government-sponsored incentives. In the past several years, we incurred restructuring expense related to closing and downsizing of facilities as part of the manufacturing transitions of our load cell products to facilities in India and China, which marked key milestones in our ongoing strategic initiatives to align and consolidate our manufacturing footprint.

Acquisition Strategy

We expect to continue to make strategic acquisitions where opportunities present themselves to grow and expand our segments. Historically, our growth and acquisition strategy had been largely focused on vertical product integration, using our foil strain gages in our load cell products, and incorporating those products into our weighing solutions. In recent years, we widened our acquisition strategy to include a broader set of precision measurement systems and product companies.

We expect to expand our expertise, and our acquisition focus, outside our traditional vertical approach to other precision measurement solutions, including in the fields of measurement of force, weight, pressure, torque, tilt, motion, and acceleration. We believe acquired businesses will benefit from improvements we implement to reduce redundant functions and from our current global manufacturing and distribution footprint.

Research and Development

Research and development will continue to play a key role in our efforts to introduce innovative products to generate new sales and to improve profitability. We expect to continue to expand our position as a leading supplier of precision foil technology products. We believe our R&D efforts should provide us with a variety of opportunities to leverage technology, products, and our manufacturing base in order to ultimately improve our financial performance. The amount charged to expense for research and development aggregated \$19.8 million, \$17.2 million, and \$12.6 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Cost Management

To be successful, we believe we must seek new strategies for controlling operating costs. Through automation in our plants, we believe we can optimize our capital and labor resources in production, inventory management, quality control, and warehousing. We are in the process of moving some manufacturing to more cost effective locations. This may enable us to become more efficient and cost competitive, and also maintain tighter controls of the operation.

Production transfers, facility consolidations, and other long-term cost-cutting measures require us to initially incur significant severance and other exit costs. We are realizing the benefits of our restructuring through lower labor costs and other operating expenses, and expect to continue reaping these benefits in future periods. However, these programs to improve our profitability also involve certain risks which could materially impact our future operating results, as further detailed in Part I, Item 1A “Risk Factors” of this Annual Report on Form 10-K.

The Company recorded restructuring costs of \$1.5 million, \$0.1 million, and \$0.9 million during the years ended December 31, 2022, 2021, and 2020, respectively, which were comprised primarily of employee termination costs, including severance and statutory retirement allowances.

We are evaluating plans to further reduce our costs by consolidating additional manufacturing operations. These plans may require us to incur restructuring and severance costs in future periods. While streamlining and reducing fixed overhead, we are exercising caution so that we will not negatively impact our customer service or our ability to further develop products and processes.

Foreign Currency

We are exposed to foreign currency exchange rate risks, particularly due to transactions in currencies other than the functional currencies of certain subsidiaries. U.S. GAAP requires that entities identify the “functional currency” of each of their subsidiaries and measure all elements of the financial statements in that functional currency. A subsidiary’s functional currency is the currency of the primary economic environment in which it operates. In cases where a subsidiary is relatively self-contained within a particular country, the local currency is generally deemed to be the functional currency. However, a foreign subsidiary that is a direct and integral component or extension of the parent company’s operations generally would have the parent company’s currency as its functional currency. We have subsidiaries that fall into each of these categories.

Foreign Subsidiaries which use the Local Currency as the Functional Currency

Our operations in Europe, Canada, and certain locations in Asia primarily generate and expend cash using local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Translation adjustments do not impact the results of operations and are reported as a separate component of equity.

For those subsidiaries where the local currency is the functional currency, revenues and expenses are translated at the average exchange rate for the year. While the translation of revenues and expenses into U.S. dollars does not directly impact the consolidated statements of operations, the translation effectively increases or decreases the U.S. dollar equivalent of revenues generated and expenses incurred in those foreign currencies.

Foreign Subsidiaries which use the U.S. Dollar as the Functional Currency

Our operations in Israel and certain locations in Asia primarily generate cash in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency. For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the results of operations. While these subsidiaries transact most business in U.S. dollars, they may have significant costs, particularly related to payroll, which are incurred in the local currency and significant lease assets and liabilities.

Effects of Foreign Exchange Rate on Operations

For the year ended December 31, 2022, exchange rate impacts decreased net revenues by \$16.1 million and decreased costs of products sold and selling, general, and administrative expenses by \$13.3 million. For the year ended December 31, 2021, exchange rate impacts increased net revenues by \$5.3 million and increased costs of products sold and selling, general, and administrative expenses by \$8.7 million.

Critical Accounting Policies and Estimates

Our significant accounting policies are summarized in Note 1 to our consolidated financial statements. We identify here a number of policies that entail significant judgments or estimates by management.

Inventories

We value our inventories at the lower of cost or market, with cost determined under the first-in, first-out method, and market based upon net realizable value. The valuation of our inventories requires management to make costing and market estimates. For work in process goods, we are required to estimate the cost to completion of the products and the prices at which we will be able to sell the products. For finished goods, we must assess the prices at which we believe the inventory can be sold. Inventories are also adjusted for estimated obsolescence and written down to net realizable value based upon estimates of future demand, technology developments, and market conditions.

Business Combinations

The Company allocates the purchase price of an acquired company, including when applicable, the fair value of contingent consideration between tangible and intangible assets acquired and liabilities assumed from the acquired businesses based on estimated fair values, with any residual of the purchase price recorded as goodwill. Third party appraisal firms and other consultants are engaged to assist management in determining the fair values of certain assets acquired and liabilities assumed. Different valuation approaches are used to value different types of intangible assets. The Company primarily uses the income approach in the valuation of intangible assets. The income approach to valuation is based on the present value of future cash flows attributable to each identifiable intangible asset. This approach to valuation requires management to make significant estimates and assumptions including but not limited to: discount rates, future cash flows and the economic lives of trade names, technology, and customer relationships. These estimates are based on historical experience and information obtained from the management of the acquired companies, and are inherently uncertain.

Goodwill and Other Indefinite-lived Intangible Assets

Goodwill and indefinite-lived trademarks are tested for impairment at least annually, and whenever events or changes in circumstances occur indicating that it is "more likely than not" impairment may have been incurred. We have the option to first assess qualitative factors to determine whether it is "more likely than not" that the fair value of a reporting unit is less than its carrying amount as a basis for determining if it is necessary to perform the quantitative goodwill impairment test. However, if we conclude otherwise, then we are required to perform the quantitative impairment test by calculating the fair value of the reporting unit and comparing it against its carrying amount.

We have four reporting units to which goodwill was allocated: steel, on-board weighing, DSI, and DTS. For the steel and on-board weighing goodwill reporting units, we performed the qualitative assessment, which included assessment of macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and other entity specific events which could impact the reporting unit. Based on this review, it was determined that the fair value of each of those reporting units was in excess of its carrying value and therefore no quantitative impairment test was required.

For the DSI and DTS goodwill reporting units, the Company performed the quantitative impairment test. In estimating the fair value of our DSI and DTS reporting units the Company used the income approach. The income approach to valuation requires management to make significant estimates and assumptions related to future revenues, profitability, working capital requirements and selection of discount rate and long term growth rate. Changes in these estimates and assumptions could have a significant impact on the fair value of the reporting units. If the fair value exceeds the carrying value, no further evaluation is required and no impairment loss is recognized. An impairment charge would be recognized to the extent the carrying amount of goodwill exceeds the reporting unit fair value.

The indefinite-lived trade names are tested for impairment either by employing the qualitative approach outlined above, or by comparing the carrying value to the fair value based on current revenue projections of the related operations, under the relief from royalty method. Any excess carrying value over the applicable fair value is recognized as impairment. Any impairment would be recognized in the reporting period in which it has been identified.

Pension and Other Postretirement Benefits

Accounting for defined benefit pension and other postretirement plans involves numerous assumptions and estimates. The discount rate at which obligations could effectively be settled and the expected long-term rate of return on plan assets are two critical assumptions in measuring the cost and benefit obligations of our pension and other postretirement benefit plans. Other important assumptions include the anticipated rate of future increases in compensation levels, estimated mortality, and for postretirement medical plans, increases or trends in health care costs. Management reviews these assumptions at least annually. We use independent actuaries to assist us in formulating assumptions and making estimates. These assumptions are updated periodically to reflect the actual experience and expectations on a plan-specific basis, as appropriate.

Our defined benefit plans are concentrated in the United States, Japan and the United Kingdom. Plans in these countries comprise approximately 88% of our retirement obligations at December 31, 2022. We utilize published long-term high-quality bond indices to determine the discount rate at the measurement date. We utilize bond yields at various maturity dates to reflect the timing of expected future benefit payments. We believe the discount rates selected are the rates at which these obligations could effectively be settled.

For benefit plans which are funded, we establish strategic asset allocation percentage targets and appropriate benchmarks for significant asset classes with the aim of achieving a prudent balance between return and risk. We set the expected long-term rate of return based on the expected long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this rate, we consider historical and expected returns for the asset classes in which the plans are invested, advice from pension consultants and investment advisors, and current economic and capital market conditions. The expected return on plan assets is incorporated into the computation of pension expense. The difference between this expected return and the actual return on plan assets is deferred.

We believe that the current assumptions used to estimate plan obligations and annual expense are appropriate in the current economic environment. However, if economic conditions change, we may be inclined to change some of our assumptions, and the resulting change could have a material impact on the consolidated statements of operations and on the consolidated balance sheets.

Income Taxes

We are subject to income taxes in the United States and numerous foreign jurisdictions. Our annual effective tax rate is based on pre-tax earnings, statutory tax rates and enacted tax laws. Significant judgments and estimates must be made in determining our consolidated income tax expense as presented in our financial statements.

We must assess the likelihood that we will realize deferred tax assets which requires significant judgment. If we determine that deferred tax assets are not "more likely than not" to be realized, we record a valuation allowance to reduce deferred tax assets to a level that is expected to be realized. If we subsequently determine that realization of a deferred tax asset becomes "more likely than not", the valuation allowance will be reversed. Any change in valuation allowances could have a significant impact on our financial results.

The calculation of our tax liabilities involves an assessment of uncertainties in the application of complex tax laws and regulations in multiple jurisdictions. We record a benefit from an uncertain tax position when it is "more likely than not" that a tax return position will be sustained upon examination, including resolutions of any related appeals or litigation based on the technical merits of the position. If the position is not "more likely than not" to be sustained, a liability for the tax return position is established. We adjust the liability when our judgment changes as a result of the evaluation of new information. The ultimate tax due in a jurisdiction may result in a payment that is materially different from our most recent estimate of the liability. Further judgment is required in determining whether an uncertain tax position is effectively settled. Any change in the analysis will impact income tax expense.

We consider the earnings of most of our non-U.S. subsidiaries to be indefinitely invested outside the United States based on our estimates that future domestic cash generation will be sufficient to meet future domestic cash needs and our plans for reinvestment of foreign subsidiary earnings. As of December 31, 2022, the Company had provided for a deferred tax liability of \$2.1 million of withholding tax associated with unremitted, non-permanently reinvested earnings, including planned cash distributions of \$19.6 million. Additional withholding taxes of approximately \$24.7 million are estimated to be payable upon the distribution of the remaining unremitted earnings at December 31, 2022. If we decide to distribute any portion of the balance of our unremitted earnings to the United States from a foreign country, we would adjust our income tax provision in the period we determine that the earnings are no longer indefinitely invested outside the United States.

Additional information about income taxes is included in Note 6 to our consolidated financial statements.

Results of Operations – Years Ended December 31, 2022 and 2021

Refer to Item 7, "Results of Operations - Years Ended December 2021, 2020, and 2019 in our Annual Report on Form 10-K for the year ended December 31, 2021 for a comparison of the year ended December 31, 2021 to the year ended December 31, 2020.

Statement of operations' captions as a percentage of net revenues and the effective tax rates were as follows:

	Years ended December 31,	
	2022	2021
Costs of products sold	58.7 %	60.6 %
Gross profit	41.3 %	39.4 %
Selling, general, and administrative expenses	28.8 %	30.0 %
Operating income	12.1 %	8.6 %
Income before taxes	12.4 %	8.2 %
Net earnings	10.1 %	6.4 %
Net earnings attributable to VPG stockholders	9.9 %	6.4 %
Effective tax rate	18.9 %	21.1 %

Net Revenues

Net revenues were as follows (*dollars in thousands*):

	Years ended December 31,	
	2022	2021
Net revenues	\$ 362,580	\$ 317,919
Change versus prior year	\$ 44,661	
Percentage change versus prior year	14.0 %	

Changes in net revenues were attributable to the following:

	2022 vs. 2021
Change attributable to:	
Change in volume	13.1 %
Change in average selling prices	2.6 %
Foreign currency effects	(5.3)%
Acquisitions	3.6 %
Net change	14.0 %

During the year ended December 31, 2022, net revenues increased 14.0% over the prior year. Volume increased in the Sensors and Measurement System reporting segments while revenues remained flat in the Weighing Solutions segments. We saw a volume increase in all of our end markets, with the largest revenue increases year over year in the Test and Measurement markets.

Gross Profit Margin

Gross profit as a percentage of net revenues was as follows:

	Years ended December 31,	
	2022	2021
Gross profit margin	41.3 %	39.4 %

The gross profit margin for the year ended December 31, 2022 increased 1.9% over the prior year. The increase in gross profit margin was primarily due to improved gross profit margins in the Sensors and Measurement Systems reporting segments, partially offset by decreased gross profit margins in the Weighing Solution reporting segment.

Segments

Analysis of revenues and gross profit margins for our reportable segments is provided below.

Sensors

Net revenues of the Sensors segment were as follows (*dollars in thousands*):

	Years ended December 31,	
	2022	2021
Net revenues	\$ 152,221	\$ 127,861
Change versus prior year	\$ 24,360	
Percentage change versus prior year	19.1 %	

Changes in Sensors segment net revenues were attributable to the following:

	2022 vs. 2021
Change attributable to:	
Change in volume	23.9 %
Change in average selling prices	2.0 %
Foreign currency effects	(6.8)%
Net change	19.1 %

For the year ended December 31, 2022, net revenues increased 19.1% as compared to the prior year, due to higher sales of precision resistors in the Test and Measurements market and higher revenue of our advanced sectors products, primarily in Other markets (mainly for consumer applications) and in the General Industrial market.

Gross profit as a percentage of net revenues for the Sensors segment was as follows:

	Years ended December 31,	
	2022	2021
Gross profit margin	40.1 %	35.6 %

For the year ended December 31, 2022, the gross profit margin increased 4.5% as compared to the prior year. Volume increases were partially offset by wage increases, and labor inefficiencies.

Weighing Solutions

Net revenues of the Weighing Solutions segment were as follows (*dollars in thousands*):

	Years ended December 31,	
	2022	2021
Net revenues	\$ 125,715	\$ 125,390
Change versus prior year	\$ 325	
Percentage change versus prior year	0.3 %	

Changes in Weighing Solutions segment net revenues were attributable to the following:

	2022 vs. 2021
Change attributable to:	
Change in volume	1.6 %
Change in average selling prices	4.1 %
Foreign currency effects	(5.4)%
Net change	0.3 %

For the year ended December 31, 2022, net revenues increased 0.3% from the prior year. The impact on revenues of increased average selling prices, coupled with a slight increase in volume, was almost completely offset by unfavorable exchange rate impacts, primarily from the Euro, the Swedish krone, and the British pound. The volume increase was mainly from sales of

products into Other Markets, for precision agriculture and construction applications, and sales of products into the General Industrial market, partially offset by lower sales of products in the Transportation market.

Gross profit as a percentage of net revenues for the Weighing Solutions segment was as follows:

	Years ended December 31,	
	2022	2021
Gross profit margin	34.3 %	36.6 %

For the year ended December 31, 2022, the gross profit margin decreased 2.3% as compared to the prior year. The slight increase in revenue as described above was offset by higher material costs, an unfavorable product mix and a reduction of inventories.

Measurement Systems

Net revenues of the Measurement Systems segment were as follows (*dollars in thousands*):

	Years ended December 31,	
	2022	2021
Net revenues	\$ 84,644	\$ 64,668
Change versus prior year	\$ 19,976	
Percentage change versus prior year	30.9 %	

Changes in Measurement Systems segment net revenues were attributable to the following:

	2022 vs. 2021
Change attributable to:	
Change in volume	14.6 %
Change in average selling prices	1.3 %
Foreign currency effects	(2.7)%
Acquisitions	17.7 %
Net change	30.9 %

For the year ended December 31, 2022, net revenues increased 30.9% as compared to the prior year, primarily due to the addition of revenue from DTS, which was acquired on June 1, 2021, in our AMS and Transportation markets and higher revenue of our KELK and DSI steel-related businesses.

Gross profit as a percentage of net revenues for the Measurement Systems segment was as follows:

	Years ended December 31,	
	2022	2021
Gross profit margin	53.6 %	52.2 %

For the year ended December 31, 2022, the gross profit margin increased 1.4% from the prior year. Higher revenue coming from DTS and our KELK and DSI steel-related businesses coupled with lower purchase accounting adjustments related to the DTS acquisition were partially offset by an unfavorable product mix, higher material costs and unfavorable foreign currency exchange rate impacts. Additionally, COVID-19 subsidies were received in 2021 that did not continue in 2022.

Selling, General, and Administrative Expenses

Selling, general, and administrative (“SG&A”) expenses were as follows (*dollars in thousands*):

	Years ended December 31,	
	2022	2021
Total SG&A expenses	\$ 104,285	\$ 95,273
as a percentage of net revenues	28.8 %	30.0 %

SG&A expenses for the year ended December 31, 2022 increased \$9.0 million as compared to the prior year due to SG&A expenses related to the acquisition of DTS, higher personnel costs including wage increases and travel costs, and other fees.

Impairment of Goodwill and Indefinite-lived Intangible Assets

For the year ended December 31, 2022, as a result of our annual impairment test performed on goodwill and indefinite-lived intangible assets there was no impairment on goodwill and indefinite-lived intangible assets. For the year ended December 31, 2021, we recorded a \$1.2 million pre-tax, non-cash impairment charge which reduced the carrying value of our goodwill and indefinite-lived intangible assets.

Restructuring Costs

Restructuring costs reflect the cost reduction programs implemented by the Company. Restructuring costs are expensed during the period in which the Company determines it will incur those costs and all requirements for accrual are met. Because these costs are recorded based upon estimates, actual expenditures for the restructuring activities may differ from the initially recorded costs. If the initial estimates are too low or too high, the Company could be required to either record additional expense in future periods, or to reverse part of the previously recorded charges.

The Company recorded restructuring costs of \$1.5 million and \$0.1 million during the years ended December 31, 2022 and 2021, respectively. Restructuring costs were comprised primarily of employee termination costs, including severance and statutory retirement allowances, and were incurred in connection with various cost reduction programs.

Acquisition Costs

There were no acquisition costs recorded in our consolidated statements of operations for the year ended December 31, 2022. For the year ended December 31, 2021, we recorded acquisition costs in our consolidated statements of operations of \$1.2 million in connection with the acquisition of DTS.

Other Income (Expense)

Interest Expense

The Company recorded interest expense of \$2.3 million, and \$1.2 million for the years ended December 31, 2022 and 2021, respectively. Interest expense was higher in 2022 compared to 2021 mainly due to higher borrowing rates during 2022.

Other

The following table analyzes the components of the line “Other” on the consolidated statements of operations (*in thousands*):

	Years ended December 31,		
	2022	2021	Change
Foreign exchange gain/(loss)	\$ 3,579	\$ (110)	\$ 3,689
Interest income	401	252	149
Pension expense	(241)	(468)	227
Other	(181)	96	(277)
	<u>\$ 3,558</u>	<u>\$ (230)</u>	<u>\$ 3,788</u>

Foreign currency exchange gains and losses represent the impact of changes in foreign currency exchange rates. The change in foreign exchange gains / (losses) for the year ended December 31, 2022, as compared to the prior year period, is primarily due to fluctuations in the Israeli shekel, the Japanese yen and the British pound. The change in the dollar-shekel exchange rate resulted in a favorable currency exchange impact primarily related to the shekel-denominated lease liability for the Sensors facility in Israel.

Income Taxes

Our effective tax rate for the year ended December 31, 2022 was 18.9%, as compared to 21.1% for the year ended December 31, 2021. Our effective tax rate was lower in 2022 compared to 2021 primarily due to changes in our geographical mix of income and releases of reserves for uncertain tax positions, offset by increases related to state income taxes, foreign currency gains and losses, changes in valuation allowances and statutory rate changes in foreign jurisdictions.

We reassessed our ability to realize our U.S. deferred tax assets during 2022 and have concluded that realization of those deferred tax assets is still not "more likely than not". Our tax rate is affected by recurring items, such as tax rates in foreign jurisdictions as compared to the U.S. federal statutory tax rate, and the relative amount of income earned in each jurisdiction. The tax rate is also impacted by discrete items that vary from year to year and may not be indicative of the tax rate on continuing operations. The following items had the most significant impact on the difference between the statutory U.S. federal income tax rate and our effective tax rate:

2022

- *2.8% increase related to the effects of foreign operations primarily related to the difference between the U.S. statutory rate and foreign tax rates*
- *1.5% increase related to foreign currency primarily attributable to our operations in India, Israel and Taiwan*
- *1.4% decrease related to specialty tax credits, such as research credits*
- *2.2% decrease related to changes in reserves for uncertain tax positions*
- *3.6% decrease related to changes in valuation allowances*

2021

- *8.1% increase related to the effects of foreign operations primarily related to the difference between the U.S. statutory rate and foreign tax rates.*
- *4.6% decrease related to a decrease in valuation allowance, primarily as a result of the acquisition of DTS*
- *1.5% decrease related to state income taxes*
- *1.3% decrease related to specialty tax credits*

Additional information about income taxes is included in Note 6 to our consolidated financial statements.

Financial Condition, Liquidity, and Capital Resources

Refer to Item 7. "Financial Condition, Liquidity, and Capital Resources" in our Annual Report on Form 10-K for the year ended December 31, 2021 for a comparison of the year ended December 31, 2021 to the year ended December 31, 2020.

We believe that our current cash and cash equivalents, credit facilities, and projected cash from operations will be sufficient to meet our liquidity needs for at least the next 12 months.

On March 20, 2020, the Company entered into a Third Amended and Restated Credit Agreement (the "2020 Credit Agreement") among the Company, the lenders named therein, Citizens Bank, National Association and Wells Fargo Bank, National Association as joint lead arrangers and JPMorgan Chase Bank, National Association as agent for such lenders (the "Agent"), pursuant to which the terms of the Company's multi-currency, secured credit facility were revised to provide a secured revolving facility (the "2020 Revolving Facility") in an aggregate principal amount of \$75.0 million, with a sublimit of \$10.0 million which can be used for letters of credit for the account of the Company or its subsidiaries that are parties to the Credit Agreement. The proceeds of the 2020 Revolving Facility may be used on an ongoing basis for working capital and general corporate purposes. The aggregate principal amount of the 2020 Revolving Facility may be increased by a maximum of \$25.0 million upon the request of the Company, subject to the terms of the 2020 Credit Agreement. The 2020 Credit Agreement terminates on March 20, 2025.

Interest payable on amounts borrowed under the 2020 Revolving Facility is based upon, at the Company's option, (1) the greatest of: the Agent's prime rate, the Federal Funds rate, or a LIBOR floor (the "Base Rate"), or (2) LIBOR or CDOR plus a specified margin. An interest margin of 0.25% is added to Base Rate loans. Depending upon the Company's leverage ratio, an interest rate margin ranging from 1.50% to 2.75% per annum is added to the applicable LIBOR or CDOR rate to determine the interest payable on the LIBOR or CDOR loans. The Company is required to pay a quarterly fee of 0.25% per annum to 0.40% per annum on the unused portion of the 2020 Revolving Facility, which is determined based on the Company's leverage ratio each quarter. Additional customary fees apply with respect to letters of credit.

The obligations of the Company under the 2020 Credit Agreement are secured by pledges of stock in certain domestic and foreign subsidiaries, as well as guarantees by substantially all of the Company's domestic subsidiaries. The obligations of the Company and the guarantors under the 2020 Credit Agreement are secured by substantially all the assets (excluding real estate) of the Company and such guarantors. The 2020 Credit Agreement restricts the Company from paying cash dividends and requires the Company to comply with other customary covenants, representations, and warranties, including the maintenance of specific financial ratios. The financial maintenance covenants include an interest coverage ratio and a leverage ratio. The Company was in compliance with its financial maintenance covenants at December 31, 2022. If the Company is not in

compliance with any of these covenant restrictions, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable.

Our business has historically generated significant cash flow. Our cash provided by operating activities for the year ended December 31, 2022 was \$33.0 million as compared to \$33.5 million for the year ended December 31, 2021. Our net cash used in investing activities for the year ended December 31, 2022 was \$20.8 million, compared to \$64.0 million for the year ended December 31, 2021, which included \$47.2 million for the purchase of DTS. Our net cash provided by financing activities for the year ended December 31, 2022 was \$3.6 million, as compared to net cash used for financing activities of \$18.8 million for the year ended December 31, 2021, which included the borrowing on the 2020 credit facility for the acquisition of DTS.

Approximately 83% and 87% of our cash and cash equivalents balance at December 31, 2022 and 2021, respectively, was held by our non-U.S. subsidiaries. See the following table for the percentage of cash and cash equivalents, by region, at December 31, 2022 and December 31, 2021:

	December 31,	
	2022	2021
Asia	27 %	24 %
United States	17 %	13 %
Israel	28 %	25 %
Europe	13 %	18 %
United Kingdom	10 %	12 %
Canada	5 %	8 %
Total	100 %	100 %

We earn a significant amount of our operating income outside the United States, the majority of which is deemed to be indefinitely reinvested in the foreign jurisdictions. As a result, as discussed above, a significant portion of our cash and short-term investments are held by foreign subsidiaries. The Company will continue to evaluate its cash needs, however we currently do not intend, nor do we foresee a need, to repatriate funds in excess of what is already planned. The Company will evaluate the possibility of repatriating future cash provided such repatriation can be accomplished in a tax efficient manner. In addition, we expect existing domestic cash, short-term investments, and cash flows from operations to continue to be sufficient to fund our domestic operating activities and cash commitments for investing and financing activities, such as debt repayment and capital expenditures, for at least the next 12 months and thereafter for the foreseeable future.

If we should require more capital in the United States than is generated by our domestic operations, for example, to fund significant discretionary activities, such as business acquisitions, we could elect to repatriate future earnings from foreign jurisdictions or raise capital in the United States through debt or equity issuances. These alternatives could result in higher tax expense, increased interest expense, or dilution of our earnings. We consider the majority of the undistributed earnings of our foreign subsidiaries, as of December 31, 2022, to be indefinitely reinvested.

For the year ended December 31, 2022, we generated adjusted free cash flow of \$12.2 million. We define “adjusted free cash flow,” a measure which management uses to evaluate our ability to fund acquisitions, as the amount of cash provided by operating activities (\$33.0 million) in excess of our capital expenditures (\$21.3 million) and net of proceeds from the sale of assets (\$0.5 million).

The following table summarizes the components of net cash at December 31, 2022 and at December 31, 2021 (*in thousands*):

	December 31,	
	2022	2021
Cash and cash equivalents	\$ 88,562	\$ 84,335
Third-party debt, including current and long-term		
Revolving debt	61,000	61,000
Deferred financing costs	(201)	(286)
Total third-party debt	60,799	60,714
Net cash	\$ 27,763	\$ 23,621

Measurements such as “adjusted free cash flow” and “net cash” do not have uniform definitions and are not recognized in accordance with U.S. GAAP. Such measures should not be viewed as alternatives to GAAP measures of performance or

liquidity. However, management believes that “adjusted free cash flow” is a meaningful measure of our ability to fund acquisitions, and that an analysis of “net cash” assists investors in understanding aspects of our cash and debt management. These measures, as calculated by us, may not be comparable to similarly titled measures used by other companies.

Our financial condition as of December 31, 2022 is strong, with a current ratio (current assets to current liabilities) of 3.9 to 1.0, as compared to a current ratio of 3.6 to 1.0 at December 31, 2021.

Cash paid for property and equipment for the year ended December 31, 2022 and December 31, 2021 was \$21.3 million and \$17.1 million, respectively. Capital spending for 2022 was comprised of building projects related to capacity expansion in Israel and Asia, and other projects related to the normal maintenance of business. Capital expenditures for 2023 are expected to be approximately \$18.5 million, which includes approximately \$10.4 million in capital equipment for capacity expansion in the Sensors reporting segment and expected building projects of approximately \$5.9 million for capacity expansion, mainly in Asia.

As of December 31, 2022 and 2021, we did not have any off-balance sheet arrangements.

Inflation

Normally, inflation does not have a significant impact on our operations as our products are not generally sold on long-term contracts. Consequently, we can adjust our selling prices, to the extent permitted by competition, to reflect cost increases caused by inflation.

Recent Accounting Pronouncements

See Note 1 to our consolidated financial statements for a discussion of recent accounting pronouncements.

Forward-Looking Statements

From time to time, information provided by us, including, but not limited to, statements in this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 or other statements made by or on our behalf, may contain or constitute “forward-looking” information within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements involve a number of risks, uncertainties, and contingencies, many of which are beyond our control, which may cause actual results, performance, or achievements to differ materially from those anticipated.

Such statements are based on current expectations only, and are subject to certain risks, uncertainties, and assumptions. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, expected, estimated, or projected. Among the factors that could cause actual results to materially differ include: general business and economic conditions; impact of inflation, issues respecting the United States federal government debt ceiling, global labor and supply chain challenges; difficulties or delays in identifying, negotiating and completing acquisitions and integrating acquired companies; the inability to realize anticipated synergies and expansion possibilities; difficulties in new product development; changes in competition and technology in the markets that we serve and the mix of our products required to address these changes; changes in foreign currency exchange rates; political, economic, health (including the COVID-19 pandemic) and military instability in the countries in which we operate; difficulties in implementing our cost reduction strategies, such as underutilization of production facilities, labor unrest or legal challenges to our lay-off or termination plans, operation of redundant facilities due to difficulties in transferring production to achieve efficiencies; compliance issues under applicable laws, such as export control laws, including the outcome of our voluntary self-disclosure of export control non-compliance; significant developments from the recent and potential changes in tariffs and trade regulation; our efforts and efforts by governmental authorities to mitigate the COVID-19 pandemic, such as travel bans, shelter-in-place orders and business closures and the related impact on resource allocations, manufacturing and supply chains; our status as a “critical”, “essential” or “life-sustaining” business in light of COVID-19 business closure laws, orders and guidance being challenged by a governmental body or other applicable authority; our ability to execute our new corporate strategy and business continuity, operational and budget plans; and other factors affecting our operations, markets, products, services, and prices that are set forth in this Annual Report on Form 10-K for the fiscal year ended December 31, 2022. We caution you not to place undue reliance on forward-looking statements, which speak only as of the date of this report or as of the dates otherwise indicated in such forward-looking statements. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain financial risks, including fluctuations in foreign currency exchange rates, interest rates, and commodity prices. We manage our exposure to these market risks through internally established policies and procedures. Our policies do not allow speculation in derivative instruments for profit or execution of derivative instrument contracts for which there are no underlying exposures. We do not use financial instruments for trading purposes and we are not a party to any leveraged derivatives. We monitor our underlying market risk exposures on an ongoing basis and believe that we can modify or adapt our strategies as needed.

Interest Rate Risk

We are exposed to changes in interest rates as a result of our borrowing activities and our cash balances.

The Company entered into a third amended and restated revolving credit facility on March 20, 2020. Interest payable on the facility is based upon the Agent's prime rate, the Federal Funds rate or LIBOR, plus a spread. At December 31, 2022, the Company had \$61.0 million of borrowings outstanding under the revolving credit facility.

At December 31, 2022, we had \$88.6 million of cash and cash equivalents, which accrue interest at various variable rates.

Based on the debt and cash positions at December 31, 2022 and 2021, we would expect a 50 basis point increase or decrease in interest rates to increase or decrease our annualized net earnings by \$0.1 million and \$0.1 million in 2022 and 2021, respectively.

See Note 7 to our consolidated financial statements for additional information about our long-term debt.

Foreign Exchange Risk

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries. Our significant foreign currency exposures are to the British pound, Canadian dollar, Chinese renminbi, euro, Indian rupee, Israeli shekel, Japanese yen, Swedish krona, and Taiwanese dollar.

Our operations in Europe, Canada, and certain locations in Asia primarily generate and expend cash in local currencies. Our operations in Israel and certain locations in Asia primarily generate cash in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency risk is mitigated to the extent that the costs incurred and the revenues earned in a particular currency offset one another. Our exposure to foreign currency risk, with respect to expenses, is more pronounced in Israel and India because the percentage of expenses denominated in Israeli shekels and Indian rupee to total expenses is much greater than the percentage of sales denominated in Israeli shekels and Indian rupee to total sales. Therefore, if the Israeli shekel and Indian rupee strengthen against all or most of our other major currencies, our operating profit is reduced. We also have a higher percentage of British pound-denominated sales than expenses. Therefore, when the British pound strengthens against all or most of our other major currencies, our operating profit is increased.

We have performed a sensitivity analysis as of December 31, 2022 and 2021, respectively, using a model that measures the change in the values arising from a hypothetical 10% adverse movement in foreign currency exchange rates relative to the U.S. dollar, with all other variables held constant. The foreign currency exchange rates we used were based on market rates in effect at December 31, 2022 and 2021, respectively. The sensitivity analysis indicated that a hypothetical 10% adverse movement in foreign currency exchange rates would impact our net earnings by approximately \$3.6 million and \$3.0 million for the years ended December 31, 2022 and December 31, 2021, respectively, although individual line items in our consolidated statements of operations could be materially affected. For example, a 10% weakening in all foreign currencies would increase the U.S. dollar equivalent of operating income generated in foreign currencies, which would be offset by foreign exchange losses of our foreign subsidiaries that have significant transactions in U.S. dollars or have the U.S. dollar as their functional currency.

A change in the mix of the currencies in which we transact our business could have a material effect on the estimated impact of the hypothetical 10% movement in the value of the U.S. dollar. Furthermore, the timing of cash receipts and disbursements could result in materially different actual results versus the hypothetical 10% movement in the value of the U.S. dollar, particularly if there are significant changes in exchange rates in a short period of time.

Commodity Price Risk

Although most materials incorporated in our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers. Some of the most highly specialized materials for our sensors are sourced from a single vendor. We maintain a safety stock inventory of certain critical materials at our facilities. Certain metals used in the manufacture of our products are traded on active markets, and can be subject to significant price volatility.

Our results of operations may be materially and adversely affected if we have difficulty obtaining these raw materials, the quality of available raw materials deteriorates, or there are significant price changes for these raw materials. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, since we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our net earnings. We also may need to record losses for adverse purchase commitments for these materials in periods of declining prices.

We estimate that a 10% increase or decrease in the costs of raw materials subject to commodity price risk would decrease or increase our net earnings by \$2.5 million and \$1.9 million for the years ended December 31, 2022 and December 31, 2021, respectively, assuming that such changes in our costs have no impact on the selling prices of our products, and that we have no pending commitments to purchase metals at fixed prices.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements required by this Item are included herein, commencing on page F-1 of this report.

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

None.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

An evaluation was performed under the supervision and with the participation of our management, including the Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act are: (1) recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms; and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Our management, including our CEO and CFO, believes that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must consider the benefits of controls relative to their costs. Inherent limitations within a control system include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. While the design of any system of controls is to provide reasonable assurance of the effectiveness of disclosure controls, such design is also based in part upon certain assumptions about the likelihood of future events, and such assumptions, while reasonable, may not take into account all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and may not be prevented or detected.

Changes in Internal Controls over Financial Reporting

There were no changes in our internal control over financial reporting during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2022 based on the 2013 framework set forth in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Brightman Almagor Zohar & Co., a firm in the Deloitte global network, has issued an attestation report on the effectiveness of our internal control over financial reporting, as stated in their report which is set forth on the next page.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Vishay Precision Group, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Vishay Precision Group, Inc. and subsidiaries (the “Company”) as of December 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report dated March 1, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Brightman Almagor Zohar & Co.
Brightman Almagor Zohar & Co.
A Firm in the Deloitte Global Network
Tel Aviv, Israel
March 1, 2023

Item 9B. OTHER INFORMATION

None.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Certain information required under this Item with respect to our Executive Officers is contained under the heading “Executive Officers” in Item 1 hereof. Other information required under this Item will be contained under the heading “Nominees for Election as Directors” in our definitive proxy statement for the Company’s 2023 Annual Meeting of Stockholders, which will be filed within 120 days of December 31, 2022, our most recent fiscal year end, and is incorporated herein by reference.

The Company has adopted codes of conduct that constitute “codes of ethics” as that term is defined in paragraph (b) of Item 406 of Regulation S-K and that apply to the Company’s principal executive officer, principal financial officer, principal accounting officer or controller, and to any persons performing similar functions. Such codes of conduct are posted on the Company’s internet website, the address of which is www.vpgsensors.com.

Item 11. EXECUTIVE COMPENSATION

Information required under this Item will be contained in our definitive proxy statement for the Company’s 2023 Annual Meeting of Stockholders, which will be filed within 120 days of December 31, 2022, our most recent fiscal year end, and is incorporated herein by reference.

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

Information required under this Item will be contained in our definitive proxy statement for the Company’s 2023 Annual Meeting of Stockholders, which will be filed within 120 days of December 31, 2022, our most recent fiscal year end, and is incorporated herein by reference.

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

Information required under this Item will be contained in our definitive proxy statement for the Company’s 2023 Annual Meeting of Stockholders, which will be filed within 120 days of December 31, 2022, our most recent fiscal year end, and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required under this Item will be contained in our definitive proxy statement for the Company’s 2023 Annual Meeting of Stockholders, which will be filed within 120 days of December 31, 2022, our most recent fiscal year end, and is incorporated herein by reference.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed as part of Form 10-K

i) Financial Statements

The Consolidated Financial Statements for the year ended December 31, 2022 are filed herewith. See index to the Consolidated Financial Statements on page F-1 of this report.

ii) Financial Statement Schedules

All financial statement schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

iii) Exhibits

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Vishay Precision Group, Inc., effective June 25, 2010 (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 1, 2010 and incorporated herein by reference).
3.2	Amendment no. 1 to Amended and Restated Certificate of Incorporation of Vishay Precision Group, Inc., effective June 2, 2011 (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on June 6, 2011 and incorporated herein by reference).
3.3	Second Amended and Restated Bylaws of Vishay Precision Group, Inc., adopted as of June 2, 2011 (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on June 6, 2011 and incorporated herein by reference).
4.1	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (previously filed as an exhibit to the Registrant's Annual Report on Form 10-K filed with the SEC on March 11, 2020 and incorporated herein by reference).
10.1	Master Separation and Distribution Agreement, dated June 22, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. (previously filed as an exhibit to the Registrant's Form 10 Registration Statement of Vishay Precision Group, Inc., filed with the Securities and Exchange Commission on June 22, 2010 and incorporated herein by reference).
10.2	Employee Matters Agreement, dated June 22, 2010, by and among Vishay Intertechnology, Inc. and Vishay Precision Group, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on June 23, 2010 and incorporated herein by reference).
10.3	Tax Matters Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.4	Trademark License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Intertechnology, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.5	Supply Agreement, dated July 6, 2010, between Vishay Advanced Technology, Ltd. and Vishay Dale Electronics, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.6*	Patent License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Dale Electronics, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.7*	Supply Agreement, dated July 6, 2010, between Vishay Dale Electronics, Inc. and Vishay Advanced Technology, Ltd. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.8*	Lease Agreement, dated July 4, 2010, between Vishay Advanced Technology, Ltd. and V.I.E.C. Ltd. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.9*	Supply Agreement, dated July 6, 2010, between Vishay Measurements Group, Inc. and Vishay S.A. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).

Exhibit No.	Description
10.10*	Manufacturing Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.11	Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.12*	Supply Agreement, dated July 6, 2010, between Vishay Precision Foil GmbH and Vishay S.A. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.13	Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Measurements Group, Inc. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.14	Lease Agreement, between Alpha Electronics Corp. and Vishay Japan Co., Ltd. (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on July 7, 2010 and incorporated herein by reference).
10.15	Stock Purchase Agreement, dated November 1, 2019, by and among Vishay Precision Group, Inc., DSI Holdings DE Inc., the sellers identified therein, and HCI Equity Partners III, L.P., not individually but solely in its capacity as the representative of the Sellers (previously filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 4, 2019 and incorporated herein by reference).
10.16	Lease Agreement between Vishay Advanced Technologies Ltd and Mega Or Holdings Ltd, dated February 17, 2019 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on January 19, 2019 and incorporated herein by reference).
10.17†	Form of Stock Option Award Agreement (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on November 12, 2010 and incorporated herein by reference).
10.18†	Form of Restricted Stock Unit Award Agreement for Director Grants (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on November 12, 2010 and incorporated herein by reference).
10.19†	Form of Restricted Stock Unit Award Agreement for Employee Grants (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on November 12, 2010 and incorporated herein by reference).
10.20†	Employment Agreement, dated November 17, 2010, by and among Vishay Advanced Technology and Ziv Shoshani (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on November 23, 2010 and incorporated herein by reference).
10.21†	Employment Agreement, dated November 17, 2010, by and among Vishay Precision Group, Inc. and William M. Clancy (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on November 23, 2010 and incorporated herein by reference).
10.22†	Amendment to Employment Agreement, dated December 8, 2011 by and among Vishay Advanced Technologies, Ltd. and Ziv Shoshani (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on December 13, 2011 and incorporated herein by reference).
10.23†	Amendment to Employment Agreement, dated December 8, 2011 by and among Vishay Precision Group, Inc. and William M. Clancy (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on December 13, 2011 and incorporated herein by reference).
10.24†	Form of Performance Restricted Stock Unit Award Agreement for Employee Grants (previously filed as an exhibit to the Registrant's Current Report on Form 10-K filed with the SEC on March 12, 2013 and incorporated herein by reference).
10.25	Lease Agreement, between George Kelk Corporation and Anndale Properties Limited (and its successors), dated January 30, 1996 and as amended as of January 17, 2011 (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with SEC on May 8, 2013 and incorporated herein by reference).
10.26†	Vishay Precision Group, Inc. 2022 Stock Incentive Plan, effective May 26, 2022 (previously filed as Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A filed with the SEC on April 14, 2022 and incorporated herein by reference).
10.27†	Amendment to Employment Agreement, dated November 7, 2013 by and among Vishay Advanced Technologies, Ltd. and Ziv Shoshani (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on November 12, 2013 and incorporated herein by reference).
10.28†	Amendment to Employment Agreement, dated November 7, 2013 by and among Vishay Precision Group, Inc. and William Clancy (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on November 12, 2013 and incorporated herein by reference).

Exhibit No.	Description
10.29	Lease agreement, dated January 26, 2014, by and among between Vishay Advanced Technologies, Inc. and Tefen Enterprises Ltd. (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2014 and incorporated herein by reference).
10.30	Stock Purchase Agreement, dated December 14, 2015, by and among VPG Systems U.S., Inc., Stress-Tek, Inc., the shareholders of Stress-Tek, Inc., and Keith Reichow, as Representative (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on December 15, 2015 and incorporated herein by reference).
10.31	Third Amended and Restated Credit Agreement, dated March 20, 2020, by and among Vishay Precision Group, Inc., the lenders party thereto, Citizens Bank, National Association, Wells Fargo Bank, National Association, and JPMorgan Chase Bank, National Association (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on March 23, 2020 and incorporated herein by reference).
10.32	Stock Purchase Agreement, dated March 30, 2016, by and among Vishay Precision Group, Inc., Pacific Instruments, Inc., the shareholders of Pacific Instruments, Inc., John Hueckel and Norman Hueckel as Owners, and John Hueckel, as Representative (previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the SEC on April 5, 2016 and incorporated herein by reference).
10.33†	Form of Indemnification Agreement with directors (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 11, 2016 and incorporated herein by reference).
10.34†	Employment Agreement, dated March 15, 2020, by and between Vishay Advanced Technologies, Ltd. and Amir Tal (previously filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 5, 2020 and incorporated herein by reference).
10.35	Lease agreement, dated July 7, 2016, by and among between Vishay Advanced Technologies, Ltd. and Marshee Estates & Investments Ltd. (previously filed as an exhibit to the Registrant's Current Report on Form 10-K filed with the SEC on March 16, 2016 and incorporated herein by reference).
10.36†	Amendment to Employment Agreement, dated May 8, 2017, by and among Vishay Precision Group, Inc. and William M. Clancy (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 9, 2017 and incorporated herein by reference).
10.37†	Amendment to Employment Agreement, dated August 7, 2017, by and among Vishay Advanced Technologies, Ltd. and Ziv Shoshani (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on August 8, 2017 and incorporated herein by reference).
10.38†	Vishay Precision Group, Inc. 2017 Non-Employee Director Compensation Plan (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 9, 2018 and incorporated herein by reference).
10.39†	Amendment to Employment Agreement, dated March 10, 2019, by and among Vishay Advanced Technologies Ltd. and Ziv Shoshani (previously filed as Exhibit 10.45 to the Registrant's Annual Report on Form 10-K filed with the SEC on March 14, 2019 and incorporated herein by reference).
10.40†	Amendment to Employment Agreement, dated March 11, 2019, by and among Vishay Precision Group, Inc. and William Clancy (previously filed as Exhibit 10.46 to the Registrant's Annual Report on Form 10-K filed with the SEC on March 14, 2019 and incorporated herein by reference).
10.41†	Amendment to Employment Agreement, dated March 4, 2021, by and between the Company and Ziv Shoshani (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 11, 2021 and incorporated herein by reference).
10.42†	Amendment to Employment Agreement, dated March 4, 2021, by and between the Company and William M. Clancy (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 11, 2021 and incorporated herein by reference).
10.43†	Amendment to Employment Agreement, dated March 4, 2021, by and between the Company and Amir Tal (previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on May 11, 2021 and incorporated herein by reference).
10.44	Stock Purchase Agreement, dated June 1, 2021, by and among Vishay Precision Group, Inc., Diversified Technical Systems, Inc., the sellers identified therein, the guarantors identified therein, and Timothy J. Kippen, not individually but solely in its capacity as the representative of the Sellers and Guarantors (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on June 1, 2021 and incorporated herein by reference).
10.45†	Form of Stock Option Agreement under the Vishay Precision Group, Inc. 2022 Stock Incentive Plan (previously filed as Exhibit 4.7 to the Registrant's Registration Statement on Form S-8 filed with the SEC on May 26, 2022).

Exhibit No.	Description
10.46†	Form of Restricted Stock Unit Agreement (Time-based Vesting) under the Vishay Precision Group, Inc. 2022 Stock Incentive Plan (previously filed as Exhibit 4.8 to the Registrant's Registration Statement on Form S-8 filed with the SEC on May 26, 2022).
10.47†	Form of Restricted Stock Unit Agreement (Performance-based Vesting) under the Vishay Precision Group, Inc. 2022 Stock Incentive Plan (previously filed as Exhibit 4.9 to the Registrant's Registration Statement on Form S-8 filed with the SEC on May 26, 2022).
10.48†	First Amendment to Vishay Precision Group, Inc. 2017 Non-Employee Director Compensation Plan (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on November 8, 2022 and incorporated herein by reference).
21.1	List of Subsidiaries.
23.1	Consent of Brightman Almagor Zohar & Co, a Firm in the Deloitte Global Network, relating to the Registrant's financial statements.
31.1	Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - Ziv Shoshani, Chief Executive Officer.
31.2	Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - William M. Clancy, Chief Financial Officer.
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 - Ziv Shoshani, Chief Executive Officer.
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 - William M. Clancy, Chief Financial Officer.
101	Interactive Data File (Annual Report on Form 10-K, for the year ended December 31, 2022, furnished in XBRL (eXtensible Business Reporting Language)).
104	Cover Page Interactive Data File formatted as Inline XBRL and contained in Exhibit 101.

* Confidential treatment has been accorded to certain portions of this Exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

† Denotes a management contract or compensatory plan, contract 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.

VISHAY PRECISION GROUP, INC.

By: /s/ Ziv Shoshani

Ziv Shoshani

President and Chief Executive Officer

Date: March 1, 2023

POWER OF ATTORNEY

Vishay Precision Group, Inc., a Delaware corporation, and each person whose signature appears below constitutes and appoints each of Ziv Shoshani and William M. Clancy, and either of them, such person's true and lawful attorney-in-fact, with full power of substitution and resubstitution, for such person and in such person's name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments to this Annual Report on Form 10-K and other documents in connection therewith, and to file the same and all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform each and every act and thing necessary or desirable to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, thereby ratifying and confirming all that said attorneys-in-fact, or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Form 10-K has been signed by the following persons on behalf of the Registrant in the capacities and on the date indicated below.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ziv Shoshani</u> Ziv Shoshani	Chief Executive Officer and Director (Principal Executive Officer)	March 1, 2023
<u>/s/ William M. Clancy</u> William M. Clancy	Executive Vice President & Chief Financial Officer (Principal Financial and Accounting Officer)	March 1, 2023
<u>/s/ Saul V. Reibstein</u> Saul V. Reibstein	Director	March 1, 2023
<u>/s/ Marc Zandman</u> Marc Zandman	Director	March 1, 2023
<u>/s/ Timothy V. Talbert</u> Timothy V. Talbert	Director	March 1, 2023
<u>/s/ Janet Clarke</u> Janet Clarke	Director	March 1, 2023
<u>/s/ Bruce Lerner</u> Bruce Lerner	Director	March 1, 2023
<u>/s/ Wesley Cummins</u> Wesley Cummins	Director	March 1, 2023
<u>/s/ Sejal Shah Gulati</u> Sejal Shah Gulati	Director	March 1, 2023

Vishay Precision Group, Inc.
Index to Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm
To the Stockholders and the Board of Directors of Vishay Precision Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vishay Precision Group, Inc. and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, equity, and cash flows for each of the three years in the period ended December 31, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 1, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with 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. 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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill – DSI Reporting Unit — Refer to Notes 1 and 4 to the Financial Statements

Critical Audit Matter Description

The Company's quantitative goodwill impairment test involves the comparison of the fair value of each reporting unit or asset to its carrying value.

In estimating the fair value of the DSI reporting unit, the Company used the income approach to evaluate the estimated fair value of the reporting unit. The income approach to valuation requires management to make significant estimates and assumptions related to future revenues, profitability, working capital requirements and selection of discount and long term growth rates. Changes in these estimates and assumptions could have a significant impact on the fair value of the reporting unit.

The carrying amount of goodwill as of December 31, 2022, for the DSI reporting unit is \$16.9 million. The fair value of the DSI reporting unit exceeds the carrying value by approximately 8%.

We identified goodwill for the DSI reporting unit as a critical audit matter because of the significant judgments made by management to estimate fair value and the sensitivity to changes in management estimates and assumptions. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of management's estimates and assumptions related to forecasts of future revenues, profitability, working capital requirements and selection of the discount and long term growth rates.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to forecasts of future revenues, profitability, working capital requirements and selection of discount and long term growth rate used by management to estimate the fair value of the DSI reporting unit included the following, among others:

- We tested the effectiveness of controls over management's impairment evaluation, including those over the determination of the fair value of the DSI reporting unit, such as controls related to management's forecasts of future revenues, profitability, working capital requirements and selection of discount and long term growth rates.
- We evaluated management's ability to accurately forecast operating performance by comparing actual results to management's historical forecasts.
- We evaluated the reasonableness of management's forecasts of future revenues, profitability and working capital requirements by comparing the forecasts to:
 - Historical revenues, profitability and working capital requirements.
 - Internal communications to management and the Board of Directors.

With the assistance of our fair value specialists, we evaluated the valuation methodologies and the reasonableness of the discount and long term growth rates, including testing the underlying source information and the mathematical accuracy of the calculations, and developing a range of independent estimates and comparing those to the discount and long term growth rates selected by management.

/s/ Brightman Almagor Zohar & Co.

Brightman Almagor Zohar & Co.

A Firm in the Deloitte Global Network

Tel Aviv, Israel

March 1, 2023

We have served as the Company's auditor since 2019.

VISHAY PRECISION GROUP, INC.

Consolidated Balance Sheets

(In thousands, except share amounts)

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 88,562	\$ 84,335
Accounts receivable, net of allowances for credit losses of \$709 and \$741, respectively	60,068	58,265
Inventories:		
Raw materials	31,852	25,464
Work in process	26,401	23,851
Finished goods	26,407	27,112
Inventories	84,660	76,427
Prepaid expenses and other current assets	18,516	15,916
Total current assets	251,806	234,943
Property and equipment:		
Land	4,117	4,241
Buildings and improvements	71,613	68,778
Machinery and equipment	125,301	122,202
Software	9,539	8,871
Construction in progress	10,075	7,747
Accumulated depreciation	(133,518)	(130,619)
Property and equipment, net	87,127	81,220
Goodwill	45,544	45,830
Intangible assets, net	48,217	52,437
Operating lease right-of-use assets	24,342	27,764
Other assets	19,706	19,695
Total assets	<u>\$ 476,742</u>	<u>\$ 461,889</u>

Continues on the following page

VISHAY PRECISION GROUP, INC.
Consolidated Balance Sheets (continued)
(In thousands, except share amounts)

	December 31, 2022	December 31, 2021
Liabilities and equity		
Current liabilities:		
Trade accounts payable	\$ 13,792	\$ 14,876
Payroll and related expenses	21,966	23,772
Other accrued expenses	20,306	17,596
Income taxes	4,064	3,774
Current portion of operating lease liabilities	4,208	4,610
Total current liabilities	<u>64,336</u>	<u>64,628</u>
Long-term debt	60,799	60,714
Deferred income taxes	4,212	5,848
Operating lease liabilities	20,043	25,140
Other liabilities	13,053	16,264
Accrued pension and other postretirement costs	7,777	12,253
Total liabilities	<u>170,220</u>	<u>184,847</u>
Commitments and contingencies		
Equity:		
Preferred stock, par value \$1.00 per share: authorized - 1,000,000 shares; none issued		
Common stock, par value \$0.10 per share: authorized - 25,000,000 shares; 12,546,375 shares outstanding as of December 31, 2022 and 12,603,220 shares outstanding as of December 31, 2021	1,325	1,322
Class B convertible common stock, par value \$0.10 per share: authorized - 3,000,000 shares; 1,022,887 shares outstanding as of December 31, 2022 and December 31, 2021	103	103
Treasury stock, at cost - 704,880 shares held at December 31, 2022 and 619,667 shares held at December 31, 2021	(11,504)	(8,765)
Capital in excess of par value	201,164	199,151
Retained earnings	156,359	120,296
Accumulated other comprehensive loss	(40,900)	(35,008)
Total Vishay Precision Group, Inc. stockholders' equity	<u>306,547</u>	<u>277,099</u>
Noncontrolling interests	(25)	(57)
Total equity	<u>306,522</u>	<u>277,042</u>
Total liabilities and equity	<u>\$ 476,742</u>	<u>\$ 461,889</u>

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VISHAY PRECISION GROUP, INC.
Consolidated Statements of Operations
(In thousands, except per share amounts)

	Years ended December 31,		
	2022	2021	2020
Net revenues	\$ 362,580	\$ 317,919	\$ 269,812
Costs of products sold	212,978	192,777	165,541
Gross profit	149,602	125,142	104,271
Selling, general, and administrative expenses	104,285	95,273	78,256
Acquisition costs	—	1,198	—
Impairment of goodwill and indefinite-lived intangibles	—	1,223	2,440
Restructuring costs	1,518	76	918
Operating income	43,799	27,372	22,657
Other income (expense):			
Interest expense	(2,269)	(1,230)	(1,366)
Other	3,558	(230)	(2,982)
Other income (expenses)	1,289	(1,460)	(4,348)
Income before taxes	45,088	25,912	18,309
Income tax expense	8,535	5,469	7,509
Net earnings	36,553	20,443	10,800
Less: net earnings attributable to noncontrolling interests	490	222	13
Net earnings attributable to VPG stockholders	\$ 36,063	\$ 20,221	\$ 10,787
Basic earnings per share attributable to VPG stockholders	\$ 2.65	\$ 1.49	\$ 0.80
Diluted earnings per share attributable to VPG stockholders	\$ 2.63	\$ 1.48	\$ 0.79
Weighted average shares outstanding - basic	13,628	13,616	13,566
Weighted average shares outstanding - diluted	13,688	13,657	13,623

See accompanying notes.

VISHAY PRECISION GROUP, INC.

Consolidated Statements of Comprehensive Income

(In thousands)

	Years ended December 31,		
	2022	2021	2020
Net earnings	\$ 36,553	\$ 20,443	\$ 10,800
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment	(11,213)	(4,684)	5,169
Pension and other postretirement actuarial items	5,321	2,347	(137)
Other comprehensive income (loss), net of tax	(5,892)	(2,337)	5,032
Comprehensive income	30,661	18,106	15,832
Less: comprehensive income attributable to noncontrolling interests	490	222	13
Comprehensive income attributable to VPG stockholders	\$ 30,171	\$ 17,884	\$ 15,819

See accompanying notes.

VISHAY PRECISION GROUP, INC.
Consolidated Statements of Cash Flows
(In thousands)

	Years ended December 31,		
	2022	2021	2020
Operating activities			
Net earnings	\$ 36,553	\$ 20,443	\$ 10,800
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Impairment of goodwill and indefinite-lived intangibles	—	1,223	2,440
Depreciation and amortization	15,353	14,996	12,507
Loss from extinguishment of debt	—	—	30
Gain on disposal of property and equipment	(117)	(5)	(130)
Reclassification of foreign currency translation adjustment related to disposal of subsidiary	191	—	—
Share-based compensation expense	2,439	2,244	1,387
Inventory write-offs for obsolescence	1,650	2,288	2,525
Deferred income taxes	(2,040)	(3,256)	1,153
Foreign currency impacts and other items	(3,915)	(1,018)	591
Net changes in operating assets and liabilities, net of acquisition:			
Accounts receivable	(4,777)	(8,038)	(753)
Inventories	(11,943)	(8,626)	2,986
Prepaid expenses and other current assets	(2,808)	(56)	67
Trade accounts payable	889	3,292	59
Other current liabilities	3,393	11,637	507
Other non current assets and liabilities, net	(1,413)	(624)	1,011
Accrued pension and other postretirement costs, net	(426)	(963)	133
Net cash provided by operating activities	33,029	33,537	35,313
Investing activities			
Capital expenditures	(21,288)	(17,061)	(22,949)
Proceeds from sale of property and equipment	451	231	983
Purchase of business	—	(47,216)	156
Net cash used in investing activities	(20,837)	(64,046)	(21,810)
Financing activities			
Principal payments on long-term debt	—	(18)	(3,493)
Debt issuance costs	—	—	(402)
Proceeds from revolving facility	—	20,000	—
Purchase of treasury stock	(2,739)	—	—
Purchase of non-controlling interest	—	—	(253)
Distributions to noncontrolling interests	(457)	(313)	(70)
Payments of employee taxes on certain share-based arrangements	(435)	(853)	(813)
Net cash (used in) provided by financing activities	(3,631)	18,816	(5,031)
Effect of exchange rate changes on cash and cash equivalents	(4,334)	(2,410)	3,056
Increase (decrease) in cash and cash equivalents	4,227	(14,103)	11,528
Cash and cash equivalents at beginning of year	84,335	98,438	86,910
Cash and cash equivalents at end of year	\$ 88,562	\$ 84,335	\$ 98,438
Supplemental disclosure of investing transactions:			
Capital expenditures purchased	\$ (19,951)	\$ (17,567)	\$ (24,327)
Capital expenditures accrued but not yet paid	\$ 1,731	\$ 3,068	\$ 2,561

See accompanying notes.

VISHAY PRECISION GROUP, INC.

Consolidated Statements of Equity

(In thousands, except share amounts)

	Common Stock	Class B Convertible Common Stock	Treasury Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total VPG Inc. Stockholders' Equity	Noncontrollin g Interests	Total Equity
Balance at January 1, 2020	\$ 1,312	\$ 103	\$ —	\$ 197,125	\$ 89,288	\$ (37,703)	\$ 241,360	\$ 392	\$ 241,752
Net earnings	—	—	—	—	10,787	—	10,787	13	10,800
Other comprehensive loss	—	—	—	—	—	5,032	5,032	—	5,032
Share-based compensation expense	—	—	—	1,387	—	—	1,387	—	1,387
Restricted stock issuances (52,433 shares)	5	—	—	(796)	—	—	(791)	—	(791)
Purchase of noncontrolling interest	—	—	—	48	—	—	48	(301)	(253)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(70)	(70)
Balance at December 31, 2020	\$ 1,317	\$ 103	\$ —	\$ 197,764	\$ 100,075	\$ (32,671)	\$ 257,823	\$ 34	\$ 257,857
Net earnings	—	—	—	—	20,221	—	20,221	222	20,443
Other comprehensive income	—	—	—	—	—	(2,337)	(2,337)	—	(2,337)
Share-based compensation expense	—	—	—	2,244	—	—	2,244	—	2,244
Restricted stock issuances (50,781 shares)	5	—	—	(857)	—	—	(852)	—	(852)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(313)	(313)
Balance at December 31, 2021	\$ 1,322	\$ 103	\$ —	\$ 199,151	\$ 120,296	\$ (35,008)	\$ 277,099	\$ (57)	\$ 277,042
Net earnings	—	—	—	—	36,063	—	36,063	490	36,553
Other comprehensive loss	—	—	—	—	—	(5,892)	(5,892)	—	(5,892)
Share-based compensation expense	—	—	—	2,439	—	—	2,439	—	2,439
Restricted stock issuances (28,368 shares)	3	—	—	(426)	—	—	(423)	—	(423)
Purchase of treasury stock (85,213 shares)	—	—	(2,739)	—	—	—	(2,739)	—	(2,739)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(458)	(458)
Balance at December 31, 2022	\$ 1,325	\$ 103	\$ —	\$ 201,164	\$ 156,359	\$ (40,900)	\$ 306,547	\$ (25)	\$ 306,522

See accompanying notes.

Vishay Precision Group, Inc.

Notes to Consolidated Financial Statements

Note 1 – Background and Summary of Significant Accounting Policies

Background

Vishay Precision Group, Inc. (“VPG” or the “Company”) is a global, diversified company focused on precision measurement and sensing technologies that help power the future by bridging the physical world with the digital one. Many of our specialized sensors, weighing solutions, and measurement systems are “designed-in” by our customers, and address growing applications across a diverse array of industries and markets. Our products are marketed under brand names that we believe are characterized as having a very high level of precision and quality, and we employ an operationally diversified structure to manage our businesses.

Principles of Consolidation

The consolidated financial statements include the accounts of the individual entities in which the Company maintained a controlling financial interest. For those subsidiaries in which the Company’s ownership is less than 100 percent, the outside stockholders’ interests are shown as noncontrolling interests in the accompanying consolidated balance sheets. All transactions, accounts, and profits between individual members comprising the Company have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ significantly from those estimates.

Revenue Recognition

The Company derives substantially all of its revenue from product sales. The Company recognizes the vast majority of its sales at a point-in-time. It utilizes the core principle of recognizing revenue when the Company satisfies performance obligations as evidenced by the transfer of control of its products to the customer.

Such revenues are derived from purchase orders and/or contracts with customers. Each contract has the promise to transfer the control of the products, each of which is individually distinct and is considered the identified performance obligation. As part of the decision to enter into each contract, the Company evaluates the customer’s credit risk, but its contracts do not have any significant financing components, as payment is generally due net 30 to 60 days after delivery. In accordance with contract terms, revenue from the Company’s product sales is recognized at the time of product shipment from its facilities or delivery to the customer location, as determined by the agreed upon shipping terms.

Under the terms of some of its contracts, the Company may be required to perform certain installation services. These installation services are performed at the time of product delivery or at some point thereafter. The installation services do not significantly modify the product provided, and although the Company may be required contractually to provide these services, the installation services could be performed by a third party or the customer. Thus, these installation services are a distinct performance obligation. In most of the applicable contracts, this installation service element is immaterial in the context of the agreement. When the installation services are accounted for as a separate performance obligation, the Company allocates the transaction price to this element based on its relative standalone selling price.

Given the specialized nature of the Company's products, the Company generally does not allow product returns. Shipping and handling costs are recorded to Costs of product sold when control of the product has transferred to the customer. The Company offers standard product warranties. Warranty related costs continue to be recognized as expense when the products are sold. Sales, value added taxes and other taxes collected concurrent with revenue-producing activities are excluded from revenue. See Note 2 for further details on Revenues.

Research and Development Expenses

Research and development costs are expensed as incurred. The amount charged to expense for research and development was \$19.8 million, \$17.2 million, and \$12.6 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Note 1 – Background and Summary of Significant Accounting Policies (continued)

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income tax expense in the period that includes the enactment date.

The Company records net deferred tax assets to the extent it believes such assets will "more likely than not" be realized. In making this determination, the Company considers all positive and negative evidence, including historic earnings, projected future income, and cost-effective tax-planning strategies. When the Company determines that its ability to realize deferred tax assets is not "more likely than not", the Company adjusts its deferred tax asset valuation allowance, which increases income tax expense.

The Company records uncertain tax positions on the basis of a two-step process in which the Company first determines whether it is "more likely than not" that the tax positions will be sustained based on the technical merits of the position and then measures those tax positions that meet the more-likely-than-not recognition threshold. The Company recognizes the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the tax authority.

The Company recognizes interest and penalties related to unrecognized tax benefits within income tax expense in the accompanying consolidated statements of operations. Accrued interest and penalties are included within the related tax liability line in the consolidated balance sheets.

Cash and Cash Equivalents

Cash and cash equivalents include demand deposits and highly liquid investments with original maturities of three months or less when purchased. Highly liquid investments with maturities greater than three months are classified as short-term investments. There were no investments classified as short-term investments at December 31, 2022 or 2021.

Allowance for Credit Losses

The Company maintains an allowance for credit losses resulting from the inability of its customers to make required payments. In determining the amount of the allowance for credit losses, the Company considers historical loss data, customer specific information, current market conditions and reasonable and supportable forecasts of future economic conditions to inform adjustments to historical loss data. The allowance for credit losses was \$0.7 million and \$0.7 million at December 31, 2022 and 2021, respectively. The credit loss was \$0.0 million, \$0.1 million, and \$0.3 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Inventories

Inventories are stated at the lower of cost, determined by the first-in, first-out method, or market based on net realizable value. Inventories are adjusted for estimated excess and obsolescence and written down to net realizable value based upon estimates of future demand, technology developments, and market conditions.

Property and Equipment

Property and equipment are carried at cost and is depreciated principally by the straight-line method based upon the estimated useful lives of the assets. Machinery and equipment are being depreciated over useful lives of seven to fifteen years. Buildings and building improvements are being depreciated over useful lives of twenty to forty years or the lease term. Software is being depreciated over useful lives of three to five years. Construction in progress is not depreciated until the assets are placed in service. Depreciation expense was \$11.5 million, \$11.7 million, and \$10.1 million for the years ended December 31, 2022, 2021, and 2020, respectively, which included software depreciation expense of \$0.7 million, \$0.6 million, and \$0.7 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Business Combinations

The Company allocates the purchase price of an acquired company, including when applicable, the fair value of contingent consideration between tangible and intangible assets acquired and liabilities assumed from the acquired businesses based on estimated fair values, with any residual of the purchase price recorded as goodwill. Estimating fair values requires significant judgments, estimates and assumptions including but not limited to: discount rates, future cash flows and the economic lives of trade names, technology, and customer relationships. These estimates are based on historical experience and information obtained from the management of the acquired companies, and are inherently uncertain.

Note 1 – Background and Summary of Significant Accounting Policies (continued)

Goodwill and Other Intangible Assets

Goodwill and indefinite-lived trademarks are tested for impairment at least annually, and whenever events or changes in circumstances occur indicating that it is "more likely than not" impairment may have been incurred. The Company has the option to first assess qualitative factors to determine whether it is "more likely than not" that the fair value of a reporting unit is less than its carrying amount as a basis for determining if it is necessary to perform the quantitative goodwill impairment test. However, if the Company concludes otherwise, then it is required to perform the quantitative impairment test by calculating the fair value of the reporting unit and comparing it against its carrying amount. If the fair value exceeds the carrying value, no further evaluation is required and no impairment loss is recognized. An impairment charge would be recognized to the extent the carrying amount of goodwill exceeds the reporting unit fair value.

The indefinite-lived trade names are tested for impairment either by employing the qualitative approach outlined above, or by comparing the carrying value to the fair value based on current revenue projections of the related operations, under the relief from royalty method. Any excess carrying value over the applicable fair value is recognized as impairment. Any impairment would be recognized in the reporting period in which it has been identified.

The Company's required goodwill and indefinite-lived asset annual impairment test is completed as of the first day of the fourth fiscal quarter each year. As described in Note 4 to the consolidated financial statements, the 2022 annual impairment test resulted in no impairment. In the second quarter of 2021, an impairment charge was recorded and in 2020, the annual impairment test resulted in an impairment charge in the fourth quarter of 2020.

Definite-lived intangible assets, such as customer relationships, patents and acquired technology, non-competition agreements, and certain trade names are amortized on a straight-line method over their estimated useful lives. Patents and acquired technology are being amortized over useful lives of seven to twenty years. Customer relationships are being amortized over useful lives of five to fifteen years. Trade names are being amortized over useful lives of seven to ten years. Non-competition agreements are being amortized over periods of five to ten years. The Company continually evaluates the reasonableness of the useful lives of these assets. Additionally, the Company reviews the carrying values of these assets for possible impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable based on undiscounted estimated cash flows expected to result from its use and eventual disposition.

Impairment of Long-Lived Assets

The carrying value of long-lived assets held-and-used, other than goodwill and indefinite-lived intangible assets, is evaluated when events or changes in circumstances indicate the carrying value may not be recoverable. The carrying value of a long-lived asset group is considered impaired when the total projected undiscounted cash flows from such asset group are separately identifiable and are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair market value of the long-lived asset group. Fair market value is determined primarily using present value techniques based on projected cash flows from the asset group. Losses on long-lived assets held-for-sale, other than goodwill and indefinite-lived intangible assets, are determined in a similar manner, except that fair market values are reduced for disposal costs.

Foreign Currency Translation

The Company has significant operations outside of the United States. The Company's operations in Europe, Canada, and certain locations in Asia primarily generate and expend cash in local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. The Company's operations in Israel and certain locations in Asia primarily generate cash in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency.

For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Revenues and expenses are translated at the average exchange rate for the year. Translation adjustments do not impact the consolidated statements of operations and are reported as a separate component of accumulated other comprehensive loss within the statement of comprehensive income. Foreign currency transaction gains and losses are included in the results of operations.

For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the consolidated statements of operations.

Note 1 – Background and Summary of Significant Accounting Policies (continued)

Share-Based Compensation

Compensation costs related to share-based payments are recognized in the consolidated financial statements. The amount of compensation cost is measured based on the grant-date fair value of the equity instruments issued. For service-based awards, compensation cost is recognized over the period that an officer, employee, or non-employee director provides service in exchange for the award. The Company recognizes forfeitures as they occur. For performance based awards, the Company recognizes compensation cost for awards that are expected to vest based on whether performance criteria are expected to be met.

Leases

The Company determines if an arrangement is or contains a lease at inception or modification of such agreement. The arrangement is or contains a lease if the contract conveys the right to control the use of the identified asset for a period in exchange for consideration.

Lease right of use assets and liabilities are recognized based on the present value of future minimum lease payments over the expected term at commencement date. As the implicit rate is not determinable in most of the Company's leases, the Company's incremental borrowing rate is used as the basis to determine the present value of future lease payments. The expected lease terms include options to extend or terminate. The period which is subject to an option to extend the lease is included in the lease term if it is reasonably certain that the option will be exercised. Some of these leases contain variable payment provisions that depend on an index or rate, initially measured using the index or rate at the lease commencement date and are therefore not included in our future minimum lease payments. Variable payments are expensed in the periods incurred. Lease expense for minimum lease payments is recognized on a straight-line basis over the expected lease term. The Company uses the practical expedients to exclude from balance sheet reporting leases with initial terms of 12 months or less and to exclude non-lease components from lease right of use assets and corresponding liabilities.

Commitments and Contingencies

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment and/or remediation can be reasonably estimated.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current financial statement presentation.

Recent Accounting Pronouncements

The Company evaluates the applicability and impact of all Accounting Standards Updates (ASUs) issued by the Financial Accounting Standards Board. ASUs that became effective in 2022 or those issued but not yet effective, are either not applicable for the Company or are expected to have no material impact on the Company's consolidated financial statement.

Note 2 – Revenues

The following table disaggregates net revenue by geographic region from contracts with customers based on net revenues generated by subsidiaries within that geographic location (*in thousands*):

	Year Ended December 31, 2022			
	Sensors	Weighing Solutions	Measurement Systems	Total
United States	\$ 51,246	\$ 58,076	\$ 52,435	\$ 161,757
United Kingdom	3,481	15,697	572	19,750
Other Europe	31,938	37,490	5,168	74,596
Israel	28,413	470	—	28,883
Asia	37,143	13,974	7,537	58,654
Canada	—	8	18,932	18,940
	<u>\$ 152,221</u>	<u>\$ 125,715</u>	<u>\$ 84,644</u>	<u>\$ 362,580</u>

Note 2 – Revenues (continued)**Year Ended December 31, 2021**

	Sensors	Weighing Solutions	Measurement Systems	Total
United States	\$ 39,845	\$ 52,542	\$ 40,095	\$ 132,482
United Kingdom	3,083	16,577	752	20,412
Other Europe	25,859	39,549	2,503	67,911
Israel	22,391	994	—	23,385
Asia	36,683	15,719	7,476	59,878
Canada	—	9	13,842	13,851
	<u>\$ 127,861</u>	<u>\$ 125,390</u>	<u>\$ 64,668</u>	<u>\$ 317,919</u>

Year Ended December 31, 2020

	Sensors	Weighing Solutions	Measurement Systems	Total
United States	\$ 39,624	\$ 46,980	\$ 21,656	\$ 108,260
United Kingdom	3,047	19,866	229	23,142
Other Europe	29,473	23,114	2,098	54,685
Israel	21,432	384	—	21,816
Asia	27,178	10,876	5,376	43,430
Canada	—	166	18,313	18,479
	<u>\$ 120,754</u>	<u>\$ 101,386</u>	<u>\$ 47,672</u>	<u>\$ 269,812</u>

The following table disaggregates net revenue by market sector (*in thousands*):

	Years Ended December 31,		
	2022	2021	2020
Test & Measurement	\$ 78,406	\$ 64,124	\$ 53,633
Avionics, Military & Space	31,399	27,303	32,607
Transportation	55,892	49,562	29,483
Other Markets	79,750	71,577	58,256
Industrial Weighing	52,109	50,626	43,441
General Industrial	21,179	16,771	15,351
Steel	43,845	37,956	37,041
	<u>\$ 362,580</u>	<u>\$ 317,919</u>	<u>\$ 269,812</u>

Contract Assets & Liabilities

Contract assets are established when revenues are recognized prior to a contractual payment due from the customer. When a payment becomes due based on the contract terms, the Company will reduce the contract asset and record a receivable. Contract liabilities are deferred revenues that are recorded when cash payments are received or due in advance of our performance obligations. Our payment terms vary by the type and location of the products offered. The term between invoicing and when payment is due is not significant.

The outstanding contract assets and liability accounts were as follows (*in thousands*):

	Contract Asset	Contract Liability
	Unbilled Revenue	Accrued Customer Advances
December 31, 2021	\$ 3,570	\$ 4,765
December 31, 2022	\$ 3,990	\$ 7,983
Increase	\$ 420	\$ 3,218

The amount of revenue recognized during the year ended December 31, 2022 that was included in the contract liability balance at December 31, 2021 was \$3.2 million.

Note 3 – Acquisition Activity

Diversified Technical Systems, Inc.

On June 1, 2021, VPG completed the acquisition of California-based Diversified Technical Systems, Inc. (“DTS”), a manufacturer of data acquisition systems and sensors for product safety and testing, for a purchase price of \$47.2 million. The Company used cash on hand and borrowings under its revolving credit facility to fund the purchase price under the purchase agreement. DTS reports into the Company's Measurement Systems segment. The following table summarizes the final fair values assigned to the assets and liabilities of DTS as of June 1, 2021 (in thousands):

	June 1, 2021
Working capital	\$ 12,494
Property and equipment	1,209
Deferred income tax liability	(6,215)
Intangible assets:	
Acquired technology	13,167
Customer relationships	8,135
Trade names	2,393
Total intangible assets	23,695
Fair value of acquired identifiable assets	31,183
Purchase price	\$ 47,216
Goodwill	\$ 16,033

(a) Working capital accounts include accounts receivable, inventory, prepaid expenses, accounts payable, accrued expenses, and accrued payroll.

The Company utilizes certain valuations and studies to determine the fair value of the tangible and intangible assets acquired. The estimated weighted average useful lives for the acquired technology and customer relationships are 15 years. Trade names are treated as indefinite-lived intangible assets. None of the goodwill associated with DTS is deductible for income tax purposes. The Company recorded acquisition costs associated with this transaction of \$1.2 million in the second quarter of 2021, which included legal fees, appraisal fees, investments banker fees and insurance costs.

Following are the supplemental consolidated financial results for the Company on an unaudited pro forma basis, as if the DTS acquisition had been consummated on January 1, 2021 (unaudited):

	Year ended December 31, 2021
	<i>(unaudited)</i>
Pro forma net revenues	\$ 331,155
Pro forma net earnings attributable to VPG stockholders	\$ 23,602
Pro forma basic earnings per share attributable to VPG stockholders	\$ 1.73
Pro forma diluted earnings per share attributable to VPG stockholders	\$ 1.73

Note 4 – Goodwill and Other Intangible Assets

At the beginning of 2022, the Company had four reporting units to which goodwill was allocated: steel, on-board weighing, DSI, and DTS.

For the steel and on-board weighing goodwill reporting units, the Company performed the qualitative assessment, which included assessment of macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and other entity specific events which could impact the reporting unit. Based on this review, it was determined that the fair value of each of those reporting units was in excess of its carrying value and therefore no quantitative impairment test was required.

For the DSI and DTS goodwill reporting units, the Company performed the quantitative impairment test. In estimating the fair value of our DSI and DTS reporting units the Company used the income approach. The income approach to valuation requires management to make significant estimates and assumptions related to future revenues, profitability, working capital requirements and selection of discount rate and long term growth rate. Changes in these estimates and assumptions could have a significant impact on the fair value of the reporting units.

The Company's required goodwill and indefinite-lived asset annual impairment test is completed as of the first day of the fourth fiscal quarter each year. In 2022, the results of the quantitative impairment test for the DSI reporting unit indicated no impairment, with the fair value exceeding the carrying value by approximately 8% for goodwill and 14% for the indefinite-lived trade name. The results for the quantitative impairment test for the DTS reporting unit indicated no impairment, with the fair value exceeding the carrying value by approximately 36% for goodwill and 34% for the indefinite-lived trade name.

Prior to 2022, the Company also had an instrumentation reporting unit. The Company's analysis in 2021 resulted in an impairment for the instrumentation reporting unit, of \$1.1 million in goodwill, which represented the remainder of the goodwill balance, and \$0.1 million in indefinite-lived intangible trade name. The Company's analysis in 2020 resulted in the fair value exceeding the carrying value for the instrumentation reporting unit and a non-cash impairment loss of \$2.4 million for the instrumentation reporting unit.

The change in the carrying amount of goodwill by segment is as follows (*in thousands*):

	Total	Measurement Systems				Weighing Solutions
		<i><u>KELK Acquisition</u></i>	<i><u>DSI Acquisition</u></i>	<i><u>Pacific Instruments Acquisition</u></i>	<i><u>DTS Acquisition</u></i>	<i><u>Stress-Tek Acquisition</u></i>
Balance at January 1, 2021	\$ 31,105	\$ 6,726	\$ 16,942	\$ 1,126	\$ —	\$ 6,311
Goodwill acquired	15,903	—	—	—	15,903	—
Impairment charges	(1,126)	—	—	(1,126)	—	—
Foreign currency translation adjustment	(52)	(20)	(32)	—	—	—
Balance at December 31, 2021	45,830	6,706	16,910	—	15,903	6,311
Adjustment to goodwill	130	—	—	—	130	—
Foreign currency translation adjustment	(416)	(393)	(23)	—	—	—
Balance at December 31, 2022	<u>\$ 45,544</u>	<u>\$ 6,313</u>	<u>\$ 16,887</u>	<u>\$ —</u>	<u>\$ 16,033</u>	<u>\$ 6,311</u>

Note 4 – Goodwill and Other Intangible Assets (continued)

Intangible assets were as follows (*in thousands*):

	December 31,	
	2022	2021
Intangible assets subject to amortization		
(Definite-lived):		
Patents and acquired technology	\$ 32,570	\$ 33,026
Customer relationships	33,226	34,036
Trade names	1,521	1,665
Non-competition agreements	10,133	11,335
	<u>77,450</u>	<u>80,062</u>
Accumulated amortization:		
Patents and acquired technology	(9,059)	(7,430)
Customer relationships	(16,209)	(14,918)
Trade names	(1,521)	(1,665)
Non-competition agreements	(10,098)	(11,329)
	<u>(36,887)</u>	<u>(35,342)</u>
Net intangible assets subject to amortization	\$ 40,563	\$ 44,720
Intangible assets not subject to amortization		
(Indefinite-lived):		
Trade names	7,654	7,717
	<u>\$ 48,217</u>	<u>\$ 52,437</u>

Certain intangible assets are subject to foreign currency translation.

Amortization expense was \$3.9 million, \$3.3 million, and \$2.4 million, for the years ended December 31, 2022, 2021, and 2020, respectively. Amortization expense in 2022 and 2021 included \$1.4 million and \$0.8 million related to the DTS acquisition.

Estimated annual amortization expense for each of the next five years is as follows (*in thousands*):

2023	\$ 3,729
2024	3,698
2025	3,681
2026	3,681
2027	3,647

Note 5 – Restructuring Costs

Restructuring costs reflect the cost reduction programs implemented by the Company. Restructuring costs are expensed during the period in which the Company determines it will incur those costs and all requirements for accrual are met. Because these costs are recorded based upon estimates, actual expenditures for the restructuring activities may differ from the initially recorded costs. If the initial estimates are too low or too high, the Company could be required to either record additional expense in future periods or to reverse part of the previously recorded charges.

The Company recorded restructuring costs of \$1.5 million, \$0.1 million, and \$0.9 million during the years ended December 31, 2022, 2021, and 2020, respectively. The restructuring costs were comprised primarily of employee termination costs, including severance and statutory retirement allowances, and were incurred in connection with various cost reduction programs.

The following table summarizes the activity to date related to these programs in the accrued restructuring liability, which is comprised of the activity associated primarily with the employee termination costs. The accrued restructuring liability balance as of December 31, 2022 and 2021, respectively, is included in other accrued expenses in the accompanying consolidated balance sheets (*in thousands*):

Note 5 – Restructuring Costs (continued)

	December 31,	
	2022	2021
Balance at beginning of year	\$ —	\$ 63
Restructuring charges	1,518	76
Cash payments	(1,338)	(138)
Foreign currency translation	3	(1)
Balance at end of year	\$ 183	\$ —

Note 6 – Income Taxes

For financial reporting purposes, income before taxes includes the following components (*in thousands*):

	Years ended December 31,		
	2022	2021	2020
Domestic	\$ (4,979)	\$ (5,956)	\$ (9,476)
Foreign	50,067	31,868	27,785
	\$ 45,088	\$ 25,912	\$ 18,309

The expense (benefit) for income taxes is comprised of (*in thousands*):

	Years ended December 31,		
	2022	2021	2020
Current:			
Federal	\$ 21	\$ 245	\$ 106
State and local	97	38	(18)
Foreign	10,457	8,442	6,268
	10,575	8,725	6,356
Deferred:			
Federal	(2,808)	(2,992)	1,718
State and local	109	(588)	(422)
Foreign	659	324	(143)
	(2,040)	(3,256)	1,153
Total income tax expense	\$ 8,535	\$ 5,469	\$ 7,509

Note 6 – Income Taxes (continued)

A reconciliation of income tax expense (benefit) at the U.S. federal statutory income tax rate to the actual income tax provision is as follows (*in thousands*):

	Years ended December 31,		
	2022	2021	2020
Tax at statutory rate	\$ 9,468	\$ 5,441	\$ 3,845
State income taxes, net of U.S. federal tax benefit	164	(391)	(176)
U.S. GILTI tax, net of foreign tax credits	8	77	—
Effect of foreign operations	1,246	2,096	729
Change in valuation allowance	(1,629)	(1,204)	2,448
Change in unrecognized tax benefits, net	(1,000)	107	(32)
Impairment of goodwill	—	237	507
Specialty tax credits	(639)	(333)	(249)
Statutory rate changes	3	(282)	(119)
Effect of foreign exchange	667	(35)	(346)
Loss of benefit of U.S. net operating loss	—	—	1,064
Excess tax benefits related to share based compensation	—	—	(168)
Other	247	(244)	6
Total income tax expense	<u>\$ 8,535</u>	<u>\$ 5,469</u>	<u>\$ 7,509</u>

In 2022, the Company recognized deferred tax benefits of \$0.1 million on net operating loss carryforwards generated in certain foreign jurisdictions, which is included in deferred tax expense (benefit) above.

The 2017 Tax Cuts and Jobs Act subjects a U.S. shareholder to tax on Global Intangible Low-Taxed Income (“GILTI”) earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in the future years or provide for tax expense related to GILTI in the year the tax is incurred. The Company has elected to recognize tax expense related to GILTI in the year the tax is incurred.

The Company recognized approximately \$26.3 million and \$11.9 million of GILTI for the years ended December 31, 2022 and 2021, respectively. For each of the years ended December 31, 2022 and 2021, the U.S. tax on GILTI, net of foreign tax credits and research credits, was less than \$0.1 million. Any excess foreign tax credits associated with GILTI are lost and cannot be carried forward to future years.

Deferred income taxes represent the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for income tax purposes.

Significant components of the Company’s deferred tax assets and liabilities are as follows (*in thousands*):

Note 6 – Income Taxes (continued)

	December 31,	
	2022	2021
Deferred tax assets:		
Pension and other postretirement costs	\$ 1,775	\$ 3,580
Inventories	4,057	2,659
Net operating/capital loss and interest carryforwards	9,060	13,562
Tax credit carryforwards	2,372	3,026
Deferred compensation	2,921	3,267
Research and development costs	2,940	832
Other accruals and reserves	2,228	3,593
Total gross deferred tax assets	25,353	30,519
Less: valuation allowance	(10,726)	(16,486)
	14,627	14,033
Deferred tax liabilities:		
Tax over book depreciation	(1,453)	(780)
Investment in subsidiary	(2,137)	(1,958)
Intangible assets, including tax deductible goodwill	(10,675)	(11,106)
Total gross deferred tax liabilities	(14,265)	(13,844)
Net deferred tax assets	\$ 362	\$ 189

In 2015, the Company established a valuation allowance with respect to substantially all of its U.S. deferred tax assets due to uncertainty regarding the realization of these assets. Throughout 2022 and 2021, the Company reassessed its ability to realize its U.S. and other deferred tax assets by considering both positive and negative evidence regarding realization. The most significant negative evidence is continuing cumulative operating losses in the U.S. The impact of the acquisitions of Stress-Tek, Pacific Instruments, DSI and DTS was also considered in determining the realization of the U.S. deferred tax assets. Other aspects, such as operating results, additional interest expense and additional tax deductions related to the Stress-Tek acquisition, were also considered. The Company also considered positive evidence such as tax planning strategies and the projected benefits of our restructuring efforts. However, there was insufficient positive evidence to overcome the negative evidence.

In June 2021, the Company acquired DTS. DTS's opening balance sheet included \$26.4 million of gross deferred tax liabilities, including \$2.4 million of indefinite-lived liabilities. The acquisition contributed to a \$1.6 million net reduction in valuation allowance and deferred tax benefit for the Company in 2021. In the second quarter of 2022, the Company completed the purchase accounting for the acquisition of DTS, which resulted in a \$0.3 million reduction of deferred tax assets and corresponding increase in goodwill.

Overall, the cumulative losses and the acquisition impacts still indicate that realization of our U.S. deferred tax assets remains uncertain such that the Company cannot conclude that it is "more likely than not" that the deferred tax assets will be recoverable. We will continue to monitor the realization of U.S. deferred tax assets and reduce the valuation allowance if, and when, sufficient positive evidence of realization exists. At December 31, 2022 and 2021, the valuation allowance on U.S. deferred tax assets was approximately \$8.7 million and \$13.9 million, respectively. The net change in this valuation allowance was approximately \$(5.2) million, of which approximately \$(3.3) million related to state tax rate changes.

The change in valuation allowance related to state taxes exclusive of rate changes was \$0.4 million benefit and \$0.6 million expense for the years ended December 31, 2022 and 2021, respectively.

The Company also has valuation allowances of \$2.1 million and \$2.6 million at December 31, 2022 and 2021, respectively, with respect to certain foreign net operating loss and capital loss carryforwards.

Significant valuation allowances are as follows (*in thousands*):

Note 6 – Income Taxes (continued)

<u>Jurisdiction</u>	December 31,	
	2022	2021
U.S. federal	\$ 2,647	\$ 4,233
U.S. state (net of U.S. federal tax benefit)	6,026	9,648
Israel - capital losses	1,287	1,537

The following table summarizes significant net operating losses, capital losses and credit carryforwards as of December 31, 2022 (*in thousands*):

<u>Jurisdiction</u>	December 31,	
	2022	Expiring
U.S. federal net operating losses	\$ 4,332	No expiration
U.S. federal interest expense carryover	6,112	No expiration
U.S. foreign tax credit	1,441	2028-2032
U.S. state net operating losses	115,028	2023-2042
Israel capital losses	5,594	No expiration

Utilization of U.S. federal net operating losses is taken into account before the GILTI deduction allowable by IRC Section 250.

Undistributed earnings of the Company's foreign subsidiaries were approximately \$233.2 million at December 31, 2022 compared to \$213.9 million at December 31, 2021. As of December 31, 2022, the Company had provided for a deferred tax liability of approximately \$2.1 million of withholding tax associated with unremitted earnings, including planned cash distributions of \$19.6 million. Substantially all of the remaining undistributed earnings are considered to be indefinitely reinvested and accordingly no provision has been made with respect to these earnings for incremental foreign income taxes, state income taxes or foreign withholding taxes. If those earnings were distributed to the U.S., the Company could be subject to incremental foreign income taxes, state income taxes, and withholding taxes. Determination of the amount of unrecognized deferred tax liability is not practicable because of the uncertainty regarding the timing of any such distribution and the impact on existing valuation allowances. In addition to the \$2.1 million, additional withholding taxes of approximately \$24.7 million are estimated to be payable upon distribution of the remaining previously unremitted earnings as of December 31, 2022.

Net income taxes paid were \$10.8 million, \$7.7 million and \$4.3 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The Company and its subsidiaries are subject to income taxes imposed by the U.S., various states, and the foreign jurisdictions in which we operate. Each jurisdiction establishes rules that set forth the years which are subject to examination by its tax authorities. While the Company believes the tax positions taken on its tax returns for each jurisdiction are supportable, they may still be challenged by the jurisdiction's tax authorities. In anticipation of such challenges, the Company has established reserves for tax-related uncertainties. These liabilities are based on the Company's best estimate of the potential tax exposures in each respective jurisdiction. It may take a number of years for a final tax liability in a jurisdiction to be determined, particularly in the event of an audit. If an uncertain matter is determined favorably, there could be a reduction in the Company's tax expense. An unfavorable determination could increase tax expense and could require a cash payment, including interest and penalties.

Note 6 – Income Taxes (continued)

The following table summarizes changes in the Company's gross liabilities, excluding interest and penalties, associated with unrecognized tax benefits (*in thousands*):

	December 31,		
	2022	2021	2020
Balance at beginning of year	\$ 1,282	\$ 1,244	\$ 1,355
Addition based on tax positions related to current year	176	52	51
Addition based on tax positions related to prior years	216	—	—
Reduction based on tax positions related to prior years	—	—	(57)
Currency translation adjustments	(6)	41	92
Reduction for settled tax examinations	(1,229)	—	(73)
Reduction for payments made	—	—	(22)
Reduction for lapses of statute of limitations	—	(55)	(102)
Balance at end of year	<u>\$ 439</u>	<u>\$ 1,282</u>	<u>\$ 1,244</u>

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax expense. Related to the unrecognized tax benefits noted above, for the years ended December 31, 2022, December 31, 2021 and December 31, 2020, the Company accrued total penalties and interest of (0.2) million, \$0.1 million and \$0.0 million, respectively. As of December 31, 2022, December 31, 2021 and December 31, 2020, accrued penalties and interest were \$0.0 million, \$0.2 million and \$0.1 million, respectively.

Included in the balance of unrecognized tax benefits as of December 31, 2022, 2021, and 2020 is \$0.4 million, \$1.3 million, and \$1.2 million, respectively, of tax benefits that, if recognized, would impact the effective tax rate. The Company believes that it is reasonably possible that an increase in unrecognized tax benefits related to foreign exposures of between \$0.1 million and \$0.2 million may be necessary in 2023. Furthermore, as of December 31, 2022, the Company anticipates that it will pay \$0.1 million of its reserves for unrecognized tax benefits, and does not anticipate that any of its current unrecognized tax benefits will reverse within the next calendar year due to the expiration of the statute of limitations.

The Company and its subsidiaries file U.S. federal income tax returns, as well as income tax returns in various state, local, and foreign jurisdictions. The Company files federal, state, and local income tax returns on a combined, unitary, or stand-alone basis. The statute of limitations in those jurisdictions generally ranges from 3 to 4 years. Additionally, the Company's foreign subsidiaries file income tax returns in the countries in which they have operations and the statutes of limitations in those jurisdictions generally range from 3 to 10 years.

During the fourth quarters of 2021 and 2022, the Company concluded tax examinations in Israel for one of its subsidiaries covering 2016 and 2017 through 2020, respectively. The conclusions of the audits resulted in the release of \$1.4 million of reserves for uncertain tax positions, including accrued interest.

During the third quarter of 2022, the Company concluded tax examinations in Germany for two of its subsidiaries, covering the years 2017 through 2019. The conclusion of the tax examinations resulted in no significant change in tax.

During the fourth quarter of 2022, the Company concluded a tax examination in Taiwan for one of its subsidiaries, covering the year 2020. The conclusion of the tax examinations resulted in no change in tax.

The Company is subject to ongoing income tax audits, administrative appeals and judicial proceedings in India spanning a number of years.

Note 7 – Long-Term Debt

Long-term debt consists of the following (*in thousands*):

	December 31,	
	2022	2021
2020 Credit Agreement - Revolving Facility	\$ 61,000	\$ 61,000
Deferred financing costs	(201)	(286)
	<u>\$ 60,799</u>	<u>\$ 60,714</u>

2020 Credit Agreement

On March 20, 2020, the Company entered into a Third Amended and Restated Credit Agreement (the “2020 Credit Agreement”) among the Company, the lenders named therein, Citizens Bank, National Association and Wells Fargo Bank, National Association as joint lead arrangers and JPMorgan Chase Bank, National Association as agent for such lenders (the “Agent”), pursuant to which the terms of the Company’s multi-currency, secured credit facility were revised to provide a secured revolving facility (the “2020 Revolving Facility”) in an aggregate principal amount of \$75.0 million, with a sublimit of \$10.0 million which can be used for letters of credit for the account of the Company or its subsidiaries that are parties to the Credit Agreement. The proceeds of the 2020 Revolving Facility may be used on an ongoing basis for working capital and general corporate purposes. The aggregate principal amount of the 2020 Revolving Facility may be increased by a maximum of \$25.0 million upon the request of the Company, subject to the terms of the 2020 Credit Agreement. The 2020 Credit Agreement terminates on March 20, 2025.

Interest payable on amounts borrowed under the 2020 Revolving Facility is based upon, at the Company’s option, (1) the greatest of: the Agent’s prime rate, the Federal Funds rate, or a LIBOR floor (the “Base Rate”), or (2) LIBOR or CDOR plus a specified margin. An interest margin of 0.25% is added to Base Rate loans. Depending upon the Company’s leverage ratio, an interest rate margin ranging from 1.50% to 2.75% per annum is added to the applicable LIBOR or CDOR rate to determine the interest payable on the LIBOR or CDOR loans. The Company is required to pay a quarterly fee of 0.25% per annum to 0.40% per annum on the unused portion of the 2020 Revolving Facility, which is determined based on the Company’s leverage ratio each quarter. Additional customary fees apply with respect to letters of credit.

The obligations of the Company under the 2020 Credit Agreement are secured by pledges of stock in certain domestic and foreign subsidiaries, as well as guarantees by substantially all of the Company’s domestic subsidiaries. The obligations of the Company and the guarantors under the 2020 Credit Agreement are secured by substantially all the assets (excluding real estate) of the Company and such guarantors. The 2020 Credit Agreement restricts the Company from paying cash dividends and requires the Company to comply with other customary covenants, representations, and warranties, including the maintenance of specific financial ratios. The financial maintenance covenants include an interest coverage ratio and a leverage ratio. The Company was in compliance with its financial maintenance covenants at December 31, 2022. If the Company is not in compliance with any of these covenant restrictions, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable.

Other Lines of Credit

In addition to the 2020 Revolving Facility discussed above, certain subsidiaries of the Company had committed short-term lines of credit with a foreign bank aggregating approximately \$5.0 million and \$3.0 million at December 31, 2022 and 2021, respectively. The Company had outstanding letters of credit under these short-term lines of credit of \$3.2 million and \$2.0 million at December 31, 2022 and 2021, respectively.

Aggregate annual maturities of long-term debt are as follows (*in thousands*):

2023	\$	—
2024		—
2025		61,000
2026		—
2027		—
Thereafter		—

Note 7 – Long-Term Debt (continued)

Interest paid on third-party debt was \$2.3 million, \$1.2 million, and \$1.3 million during the years ended December 31, 2022, 2021, and 2020, respectively.

Note 8 – Stockholders' Equity

The Company's Class B convertible common stock carries ten votes per share. The common stock carries one vote per share. Class B shares are transferable only to certain permitted transferees while the common stock is freely transferable. Class B shares are convertible on a one-for-one basis at any time into shares of common stock. Transfers of Class B shares other than to permitted transferees result in the automatic conversion of the Class B shares into common stock.

The Board of Directors may only declare dividends or other distributions with respect to the common stock or the Class B convertible common stock if it grants such dividends or distributions in the same amount per share with respect to the other class of stock. As discussed in Note 7, the Company is restricted from paying cash dividends. Stock dividends or distributions, on any class of stock, are payable only in shares of stock of that class. Shares of either common stock or Class B convertible common stock cannot be split, divided, or combined unless the other is also split, divided, or combined equally.

On August 8, 2022, the Board of Directors of the Company authorized the repurchase of up to 600,000 shares of the Company's outstanding common stock (the "Stock Repurchase Plan"). The Stock Repurchase Plan will expire on August 11, 2023, and the Board of Directors authorized purchases thereunder to be made through an issuer repurchase plan adopted under Rule 10b5-1 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), open market purchases or private transactions, in accordance with the applicable federal securities laws, including Rule 10b-18 under the Exchange Act. At December 31, 2022, the Company had repurchased 85,213 shares of its common stock under the Stock Repurchase Plan.

The Board of Directors is authorized, without further stockholder approval, to issue from time to time up to an aggregate of 1,000,000 shares of preferred stock in one or more series. The Board of Directors may fix or alter the designation, preferences, rights and any qualification, limitations, restrictions of the shares of any series, including the dividend rights, dividend rates, conversion rights, voting rights, redemption terms and prices, liquidation preferences and the number of shares constituting any series. No shares of the Company's preferred stock are currently outstanding.

Note 8 – Stockholders' Equity (continued)**Other Comprehensive Income (Loss)**

The cumulative balance of each component of other comprehensive income (loss) and the income tax effects allocated to each component are as follows (*in thousands*):

	Beginning Balance	Before- Tax Amount	Tax Effect	Net-of- Tax Amount	Ending Balance
December 31, 2020					
Pension and other postretirement actuarial items	\$ (6,942)	\$ (920)	\$ 319	\$ (601)	\$ (7,543)
Reclassification adjustment for recognition of actuarial items	—	537	(73)	464	464
Foreign currency translation adjustment	(30,761)	5,070	99	5,169	(25,592)
	<u>\$ (37,703)</u>	<u>\$ 4,687</u>	<u>\$ 345</u>	<u>\$ 5,032</u>	<u>\$ (32,671)</u>
December 31, 2021					
Pension and other postretirement actuarial items	\$ (7,079)	\$ 2,332	\$ (376)	\$ 1,956	\$ (5,123)
Reclassification adjustment for recognition of actuarial items	—	498	(107)	391	391
Foreign currency translation adjustment	(25,592)	(4,606)	(78)	(4,684)	(30,276)
	<u>\$ (32,671)</u>	<u>\$ (1,776)</u>	<u>\$ (561)</u>	<u>\$ (2,337)</u>	<u>\$ (35,008)</u>
December 31, 2022					
Pension and other postretirement actuarial items	\$ (4,732)	\$ 5,797	\$ (1,021)	\$ 4,776	\$ 44
Reclassification adjustment for recognition of actuarial items	—	721	(176)	545	545
Foreign currency translation adjustment	(30,276)	(11,243)	(161)	(11,404)	(41,680)
Reclassification adjustment for foreign currency translation	—	191	—	191	191
	<u>\$ (35,008)</u>	<u>\$ (4,534)</u>	<u>\$ (1,358)</u>	<u>\$ (5,892)</u>	<u>\$ (40,900)</u>

In 2022, Reclassification of foreign currency translation adjustment for gain on liquidation of a subsidiary is included in other income (expense) other (See Note 15). Reclassifications of pension and other postretirement actuarial items out of accumulated other comprehensive income (loss) are included in the computation of net periodic benefit cost (See Note 9).

Note 9 – Pensions and Other Postretirement Benefits**Defined Benefit Plans**

Employees of the Company participate in various defined benefit pension and other postretirement benefit plans.

U.S. Pension Plan

The Vishay Precision Group Non-Qualified Retirement Plan, like all nonqualified plans, is considered to be unfunded. The Company maintains a nonqualified trust, referred to as a “rabbi” trust, to fund benefits under this plan. Rabbi trust assets are subject to creditor claims under certain conditions and are not the property of employees. Therefore, they are accounted for as other noncurrent assets within the consolidated balance sheets. The assets held in the rabbi trust are invested in money market funds and company-owned life insurance policies. The consolidated balance sheets include assets held in trust related to the nonqualified pension plan of \$1.5 million at December 31, 2022 and \$1.9 million at December 31, 2021, and the related liabilities of \$2.1 million and \$2.6 million at December 31, 2022 and 2021, respectively.

The Vishay Precision Group Non-Qualified Retirement Plan is frozen. Accordingly, no new employees may participate in the plan, no further participant contributions are permitted, and no further benefits accrue. Benefits accumulated prior to the freezing of the U.S. pension plan will be paid to employees upon retirement, and the Company will likely need to make additional cash contributions to the rabbi trust to fund this accumulated benefit obligation.

Non-U.S. Pension Plans

The Company provides pension and similar benefits to employees of certain non-U.S. subsidiaries consistent with local practices. Pension benefits earned are generally based on years of service and compensation during active employment.

Note 9 – Pensions and Other Postretirement Benefits (continued)

The following table sets forth a reconciliation of the benefit obligation, plan assets, and funded status related to pension plans (in thousands):

	December 31, 2022		December 31, 2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Change in benefit obligation:				
Benefit obligation at beginning of year	\$ 2,626	\$ 26,157	\$ 2,747	\$ 28,088
Service cost (adjusted for actual employee contributions)	—	308	—	379
Interest cost	65	395	57	353
Actuarial gains	(533)	(7,125)	(103)	(792)
Benefits paid	(108)	(652)	(75)	(851)
Curtailments and settlements	—	(567)	—	(108)
Plan amendments and other	—	—	—	(172)
Currency translation	—	(2,663)	—	(740)
Benefit obligation at end of year	<u>\$ 2,050</u>	<u>\$ 15,853</u>	<u>\$ 2,626</u>	<u>\$ 26,157</u>
Change in plan assets:				
Fair value of plan assets at beginning of year	\$ —	\$ 19,717	\$ —	\$ 18,157
Actual return on plan assets	—	(1,773)	—	1,044
Company contributions	108	1,064	75	1,613
Benefits paid	(108)	(652)	(75)	(851)
Currency translation	—	(2,047)	—	(246)
Fair value of plan assets at end of year	<u>\$ —</u>	<u>\$ 16,248</u>	<u>\$ —</u>	<u>\$ 19,717</u>
Funded status at end of year	<u>\$ (2,050)</u>	<u>\$ 395</u>	<u>\$ (2,626)</u>	<u>\$ (6,440)</u>

Actuarial gains incurred in 2022 and 2021 related to our U.S. and non-U.S. plans are primarily the result of an increase in the discount rate assumptions used to estimate the benefit obligations as of December 31, 2022 compared to December 31, 2021 and as of December 31, 2021 compared to December 31, 2020.

Amounts recognized in the consolidated balance sheets consist of the following pre-tax amounts (in thousands):

	December 31, 2022		December 31, 2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Other assets	\$ —	\$ 3,301	\$ —	\$ —
Other accrued expenses	\$ (137)	\$ (179)	\$ (107)	\$ (375)
Accrued pension and other postretirement costs	\$ (1,913)	\$ (2,727)	\$ (2,519)	\$ (6,065)
Accumulated other comprehensive loss	\$ 137	\$ 577	\$ 693	\$ 6,764
	<u>\$ (1,913)</u>	<u>\$ 972</u>	<u>\$ (1,933)</u>	<u>\$ 324</u>

Unrecognized actuarial gains and losses arise from several factors, including experience and assumption changes with respect to the obligations and from the difference between expected returns and actual returns on plan assets. Actuarial items consist of the following (in thousands):

Note 9 – Pensions and Other Postretirement Benefits (continued)

	December 31, 2022		December 31, 2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Unrecognized net actuarial loss	\$ 137	\$ 532	\$ 693	\$ 6,709
Unrecognized prior service cost	—	45	—	55
	<u>\$ 137</u>	<u>\$ 577</u>	<u>\$ 693</u>	<u>\$ 6,764</u>

The following table sets forth additional information regarding the projected and accumulated benefit obligations for the pension plans (*in thousands*):

	December 31, 2022	
	U.S. Plans	Non-U.S. Plans
Accumulated benefit obligation, all plans	\$ 2,050	\$ 14,489
Plans for which the accumulated benefit obligation exceeds plan assets:		
Projected benefit obligation	\$ 2,050	\$ 3,008
Accumulated benefit obligation	\$ 2,050	\$ 2,448

	December 31, 2021	
	U.S. Plans	Non-U.S. Plans
Accumulated benefit obligation, all plans	\$ 2,626	\$ 23,796
Plans for which the accumulated benefit obligation exceeds plan assets:		
Projected benefit obligation	\$ 2,626	\$ 23,451
Accumulated benefit obligation	\$ 2,626	\$ 22,634
Fair value of plan assets	\$ —	\$ 17,778

Unrecognized gains and losses are amortized into future net periodic pension cost using the 10% corridor method over the expected remaining service life of the employee group. The following table sets forth the components of net periodic cost of pension (*in thousands*):

	Years ended December 31,					
	2022		2021		2020	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Annual service cost	\$ —	\$ 308	\$ —	\$ 379	\$ —	\$ 402
Interest cost	65	395	57	353	70	442
Expected return on plan assets	—	(454)	—	(393)	—	(442)
Amortization of actuarial losses	22	736	27	459	109	286
Amortization of transition obligation	—	(40)	—	(8)	—	5
Curtailement and settlement losses	—	(512)	—	(108)	—	—
Net periodic benefit cost	<u>\$ 87</u>	<u>\$ 433</u>	<u>\$ 84</u>	<u>\$ 682</u>	<u>\$ 179</u>	<u>\$ 693</u>

See Note 8 for the pre-tax, tax effect, and after tax amounts included in other comprehensive income during the years ended December 31, 2022, 2021, and 2020.

Note 9 – Pensions and Other Postretirement Benefits (continued)

The following weighted-average assumptions were used to determine benefit obligations at December 31 of the respective years:

	2022		2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Discount rate	4.91 %	4.23 %	2.53 %	1.66 %
Rate of compensation increase	N/A	2.49 %	N/A	2.97 %
Expected return on plan assets	N/A	3.96 %	N/A	2.10 %

The following weighted-average assumptions were used to determine the net periodic pension costs for the years ended December 31, 2022 and 2021:

	2022		2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Discount rate	2.53 %	1.66 %	2.11 %	1.29 %
Rate of compensation increase	N/A	2.97 %	N/A	2.77 %
Expected return on plan assets	N/A	2.10 %	N/A	2.66 %

The plans' expected return on assets is based on management's expectation of long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this assumption, management considers historical and expected returns for the asset classes in which the plans are invested, advice from pension consultants and investment advisors, and current economic and capital market conditions.

The investment mix between equity securities and fixed income securities is based upon achieving a desired return, balancing higher return, more volatile equity securities, and lower return, less volatile fixed income securities. The target allocation of plan assets approximates the actual allocation of plan assets at December 31, 2022 and 2021.

Plan assets are comprised of:

	December 31, 2022		December 31, 2021	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Equity securities	—	48 %	—	47 %
Fixed income securities	—	42 %	—	39 %
Cash and cash equivalents	—	10 %	—	14 %
Total	—	100 %	—	100 %

The Company maintains defined benefit retirement plans in certain of its subsidiaries. The assets of the plans are measured at fair value.

Equity securities held by the defined benefit retirement plans consist of equity securities that are valued based on quoted market prices on the last business day of the year. The fair value measurement of the equity securities is considered a Level 2 measurement within the fair value hierarchy.

Fixed income securities held by the defined benefit retirement plans consist of government bonds and corporate notes that are valued based on quoted market prices on the last business day of the year. The fair value measurement of the fixed income securities is considered a Level 2 measurement within the fair value hierarchy.

Cash held by the defined benefit retirement plans consists of deposits on account in various financial institutions. The carrying amount of the cash approximates its fair value. A summary of the Company's pension plan assets for each fair value hierarchy level are as follows for the periods presented (see Note 16 for further description of the levels within the fair value hierarchy (*in thousands*)):

Note 9 – Pensions and Other Postretirement Benefits (continued)**As of December 31, 2022**

	Total Fair Value	Fair value measurements at reporting date using:		
		Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
Defined benefit pension plan assets				
Equity securities	\$ 7,736	\$ —	\$ 7,736	\$ —
Fixed income securities	6,813	—	6,813	—
Cash and cash equivalents	1,699	1,511	188	—
	<u>\$ 16,248</u>	<u>\$ 1,511</u>	<u>\$ 14,737</u>	<u>\$ —</u>

As of December 31, 2021

	Total Fair Value	Fair value measurements at reporting date using:		
		Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
Defined benefit pension plan assets				
Equity securities	\$ 9,262	\$ —	\$ 9,262	\$ —
Fixed income securities	7,646	—	7,646	—
Cash and cash equivalents	2,809	1,577	1,232	—
	<u>\$ 19,717</u>	<u>\$ 1,577</u>	<u>\$ 18,140</u>	<u>\$ —</u>

Estimated future benefit payments are as follows (*in thousands*):

	US Pension Plans	Non-US Plans
2023	\$ 137	\$ 721
2024	136	740
2025	138	923
2026	138	598
2027	138	889
2028-2032	803	5,590

The Company anticipates making contributions to its funded and unfunded pension of approximately \$1.2 million during 2023.

Other Postretirement Benefit Plans

In the U.S., the Company maintains two unfunded non-pension other postretirement benefit plans (“OPEB”) which are funded as costs are incurred. These plans provide medical and death benefits to retirees.

Note 9 – Pensions and Other Postretirement Benefits (continued)

The following table sets forth a reconciliation of the benefit obligation, plan assets, and funded status related to other postretirement benefit plans (*in thousands*):

	OPEB Plans	
	December 31,	
	2022	2021
Change in benefit obligation:		
Benefit obligation at beginning of year	\$ 2,885	\$ 3,577
Service cost (adjusted for actual employee contributions)	29	36
Interest cost	67	68
Contributions by participants	—	—
Actuarial gains	(453)	(591)
Benefits paid	(142)	(205)
Plan amendments and other	—	—
Benefit obligation at end of year	<u>\$ 2,386</u>	<u>\$ 2,885</u>
Change in plan assets:		
Fair value of plan assets at beginning of year	\$ —	\$ —
Company contributions	142	205
Contributions by participants	—	—
Benefits paid	(142)	(205)
Fair value of plan assets at end of year	<u>\$ —</u>	<u>\$ —</u>
Funded status at end of year	<u>\$ (2,386)</u>	<u>\$ (2,885)</u>

Actuarial gains incurred in 2022 and 2021 related to our post-retirement plans are primarily the result of an increase in the discount rate assumptions used to estimate the benefit obligations as of December 31, 2022 and December 31, 2021 and as of December 31, 2021 compared to December 31, 2020.

Amounts recognized in the consolidated balance sheets consist of the following pre-tax amounts (*in thousands*):

	OPEB Plans	
	December 31,	
	2022	2021
Other accrued expenses	\$ (189)	\$ (227)
Accrued pension and other postretirement costs	\$ (2,197)	\$ (2,658)
Accumulated other comprehensive gain	\$ (484)	\$ (28)
	<u>\$ (2,870)</u>	<u>\$ (2,913)</u>

Actuarial items consist of the following (*in thousands*):

	OPEB Plans	
	December 31,	
	2022	2021
Unrecognized net actuarial gain	\$ (484)	\$ (28)
	<u>\$ (484)</u>	<u>\$ (28)</u>

Note 9 – Pensions and Other Postretirement Benefits (continued)

Unrecognized gains and losses are amortized into future net periodic benefit cost using the 10% corridor method over the expected remaining service life of the employee group. The following table sets forth the components of net periodic benefit costs (*in thousands*):

	OPEB Plans		
	Years ended December 31,		
	2022	2021	2020
	OPEB Plans	OPEB Plans	OPEB Plans
Net service cost	29	36	123
Interest cost	67	68	133
Amortization of actuarial losses	3	20	137
Net periodic benefit cost	\$ 99	\$ 124	\$ 393

See Note 8 for the pre-tax, tax effect, and after tax amounts included in other comprehensive income during the years ended December 31, 2022, 2021, and 2020.

The following weighted-average assumptions were used to determine benefit obligations at December 31 of the respective years:

	OPEB Plans	
	December 31,	
	2022	2021
Discount rate	4.88 %	2.46 %

The following weighted-average assumptions were used to determine the net periodic benefit costs for the years ended December 31, 2022 and 2021:

	OPEB Plans	
	December 31,	
	2022	2021
Discount rate	2.46 %	1.99 %
Health care trend rate	6.50 %	6.00 %

The health care trend ultimate rate is 4.14% per the terms of the plan. The impact of a one-percentage-point change in assumed health care cost trend rates on the net periodic benefit cost and postretirement benefit obligation is not material.

Estimated future benefit payments are as follows (*in thousands*):

	OPEB Plans
2023	\$ 189
2024	201
2025	199
2026	188
2027	218
2028-2032	940

As the plans are unfunded, the Company's anticipated contributions for 2023 are equal to the estimated benefit payment.

Other Retirement Obligations

The Company participates in various other defined contribution plans based on local law or custom. The Company periodically makes contributions to these plans. At December 31, 2022 and 2021, the consolidated balance sheets include \$0.9 million and \$1.0 million, respectively, within accrued pension and other postretirement costs related to these plans.

Note 9 – Pensions and Other Postretirement Benefits (continued)

Most of the Company's U.S. employees are eligible to participate in 401(k) savings plans which provide company matching under various formulas. The Company's matching expense for the plans was \$1.1 million, \$1.0 million, and \$0.8 million for the years ended December 31, 2022, 2021, and 2020, respectively. No material amounts are included in the consolidated balance sheets related to unfunded 401(k) contributions.

Certain key employees participate in a nonqualified deferred compensation plan, which allows these employees to defer a portion of their compensation until retirement, or elect shorter deferral periods. The accompanying consolidated balance sheets include a liability within other noncurrent liabilities related to these deferrals. The Company maintains a nonqualified trust, referred to as a "rabbi" trust, to fund payments under this plan. Rabbi trust assets are subject to creditor claims under certain conditions and are not the property of employees. Therefore, they are accounted for as other noncurrent assets within the consolidated balance sheets. The assets held in the rabbi trust are invested in money market funds and company-owned life insurance policies. The consolidated balance sheets include assets held in trust related to the nonqualified deferred compensation plan of \$3.9 million at December 31, 2022 and \$4.2 million at December 31, 2021, and the related liabilities of \$5.3 million and \$6.0 million at December 31, 2022 and 2021, respectively.

Note 10 – Share-Based Compensation

On May 26, 2022, the Company's stockholders voted to approve the adoption of the Vishay Precision Group, Inc. 2022 Stock Incentive Plan (the "2022 plan"), which replaced the Amended and Restated Vishay Precision Group, Inc. 2010 Stock Incentive Program (the "previous plan"). The 2022 plan permits the issuance of up to 608,000 shares of common stock, which includes approximately 308,000 shares that were reserved for issuance under the previous plan and up to an additional 197,685 additional shares underlying awards outstanding under the previous plan. At December 31, 2022, the Company had reserved 590,034 shares of common stock for future grant of equity awards (restricted stock, unrestricted stock, restricted stock units ("RSUs"), or stock options). If any outstanding awards expire, are canceled or are forfeited, the underlying shares would be available for future grants under the Plan.

Restricted Stock Units

Pursuant to the 2022 plan, the Company issued RSUs to board members, executive officers, and certain employees of the Company during 2022. The amount of compensation cost related to share-based payment transactions is measured based on the grant-date fair value of the equity instruments issued. VPG determines compensation cost for RSUs based on the grant-date fair value of the underlying common stock. Compensation cost is recognized over the period that the participant provides service in exchange for the award. The Company recognizes compensation cost for RSUs that are expected to vest and for which performance criteria are expected to be met.

On January 1, 2022, and in accordance with the Company's 2017 Non-Employee Director Compensation Plan (the "Director Plan"), the Board of Directors approved the issuance of an aggregate of 595 RSUs to the newly-appointed independent member of the Board of Directors. This award represented a pro-rated portion of the annual equity grant made to non-executive directors pursuant to the Director Plan. The aggregate grant-date fair value of this award is immaterial, and the award vested on May 26, 2022, the date of the 2022 Annual Stockholders Meeting.

On March 3, 2022, and in accordance with their respective employment agreements, VPG's three executive officers were granted annual equity awards in the form of RSUs, of which 50% are performance-based. The awards have an aggregate target grant-date fair value of \$1.5 million were comprised of 47,831 RSUs. Fifty percent of these awards will vest on January 1, 2025, subject to the executives' continued employment. The performance-based portion of the RSUs will also vest on January 1, 2025, subject to the executives' continued employment and the satisfaction of certain performance objectives relating to three-year cumulative "adjusted free cash flow" and net earnings goals, each weighted equally.

On March 9, 2022, certain non-executive VPG employees were granted annual equity awards in the form of RSUs. Certain employees received awards, of which 75% are performance-based and certain employees received awards of which 50% are performance based. The awards have an aggregate target grant-date fair value of \$0.5 million and were comprised of 16,324 RSUs. The non-performance portion of these awards (twenty-five percent for certain employees and fifty percent for certain employees) will vest on January 1, 2025, subject to the employees' continued employment. The performance-based portion of the RSUs will also vest on January 1, 2025, subject to the employees' continued employment and the satisfaction of certain performance objectives relating to three-year cumulative earnings and cash flow goals, each weighted equally.

On May 26, 2022 and in accordance with the Company's 2017 Non-Employee Director Compensation Plan, as amended at such time, the Board of Directors approved the issuance of an aggregate of 16,534 RSUs to the independent board members of the Board of Directors and to the non-executive Chairman of the Board of Directors. The awards have an aggregate grant-date fair value of \$0.5 million and will vest on the earlier of the 2023 Annual Stockholders meeting or May 26, 2023, subject to the directors' continued service on the Board of Directors.

Note 10 – Share-Based Compensation (continued)

On July 1, 2022, a non-executive VPG employee was granted an annual equity award in the form of RSU's, of which 50% are performance-based. The award has an aggregate grant-date fair value of \$0.04 million and was comprised of 1,432 RSU's. The non-performance portion of this award will vest on July 1, 2025, subject to the employees' continued employment. The performance-based portion of the RSUs will also vest on July 1, 2025, subject to the employees' continued employment and the satisfaction of certain performance objectives relating to three-year cumulative earnings and cash flow goals, each weighted equally.

Vesting of equity awards may be subject to acceleration under certain circumstances.

RSU activity is presented below (*number of RSUs in thousands*):

	Years ended December 31,					
	2022		2021		2020	
	Number of RSUs	Weighted Average Grant-date Fair Value	Number of RSUs	Weighted Average Grant-date Fair Value	Number of RSUs	Weighted Average Grant-date Fair Value
Outstanding:						
Beginning of year	198	\$ 31.07	205	\$ 28.23	212	\$ 25.97
Granted	82	30.68	80	33.13	79	24.16
Vested	(40)	34.29	(77)	25.87	(81)	19.02
Forfeited	(36)	33.15	(10)	29.43	(5)	15.75
End of year	204	\$ 29.92	198	\$ 31.07	205	\$ 28.23

The fair value of the RSUs vested during 2022 is \$1.3 million, which approximates grant date fair value. Included in the 2022, 2021 and 2020 activity are RSU's forfeited as a result of performance objectives not being met. These awards are therefore available for future grants under the Plan.

RSUs with performance-based vesting criteria are expected to vest as follows (*number of RSUs in thousands*):

Vesting Date	Expected to Vest	Not Expected to Vest	Total
January 1, 2023	35	8	43
January 1, 2024	33	1	34
January 1, 2025 and July 1 2025	33	1	34

Share-Based Compensation Expense

The following table summarizes pre-tax share-based compensation expense recognized (*in thousands*):

	Years ended December 31,		
	2022	2021	2020
Restricted stock units	\$ 2,439	\$ 2,244	\$ 1,387

Share-based compensation expense is recognized ratably over the vesting period of the awards and for RSUs with performance criteria, is recognized for RSU's that are expected to vest and for which performance criteria are expected to be met.

During the fourth quarter of 2022, a net adjustment of \$0.3 million increasing share-based compensation expense was recorded, based on the valuation of performance objectives associated primarily with awards granted in 2020. It was determined that certain objectives, which were deemed not likely to be met in previous years, were met.

During the fourth quarter of 2021, a net adjustment of \$0.5 million increasing share-based compensation expense was recorded, based on the evaluation of performance objectives associated with awards granted in 2019. It was determined that certain objectives, which were deemed not likely to be met in previous years, were met.

During the fourth quarter of 2020, a net adjustment decreasing share-based compensation expense by \$0.1 million was recorded, based on the evaluation of performance objectives associated with awards granted in 2018, 2019 and 2020. It was determined that certain objectives were not likely to be fully met, necessitating a reversal of certain compensation expense associated with those awards. This was partially offset by additional share based compensation expense being recorded for certain objectives being fully met, which had been reversed in the prior year.

Note 10 – Share-Based Compensation (continued)

The total tax benefit on share-based compensation expense was \$0.5 million, \$0.5 million and \$0.1 million for the years ended December 31, 2022, 2021 and 2020, respectively. The deferred tax benefit on share-based compensation expense was \$0.2 million, \$0.4 million, and \$0.0 million for the years ended December 31, 2022, 2021, and 2020, respectively.

As of December 31, 2022, the Company had \$2.2 million of unrecognized share-based compensation expense related to share-based awards that will be recognized over a weighted-average period of approximately 1.5 years.

Note 11 – Commitments, Contingencies, and Concentrations

Litigation

The Company is subject to various legal proceedings that constitute ordinary, routine litigation incidental to its business. The Company is of the opinion that the disposition of these proceedings will not have a material adverse effect on its business or its financial condition, results of operations, and cash flows.

Executive Employment Agreements

The Company has employment agreements with its executive officers which outline base salary, incentive compensation, and equity-based compensation. The employment agreements with the Company's executive officers also provide for incremental compensation in the event of termination without cause or resignation for good reason.

Sources of Supplies

Although most materials incorporated in the Company's products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers.

Some of the most highly specialized materials for the Company's sensors are sourced from a single vendor. The Company maintains a safety stock inventory of certain critical materials at its facilities.

Certain metals used in the manufacture of the Company's products are traded on active markets, and can be subject to significant price volatility.

Market Concentrations

No single customer comprises greater than 10% of net revenues.

The vast majority of the Company's products are used in the broad industrial market, with selected uses in military and aerospace, medical, agriculture, and construction. Within the broad industrial segment, the Company's products serve wide applications in the waste management, bulk hauling, logging, scale manufacturing, engineering systems, pharmaceutical, oil, chemical, steel, paper, and food industries.

Credit Risk Concentrations

Financial instruments with potential credit risk consist principally of cash and cash equivalents, accounts receivable, and notes receivable. The Company maintains cash and cash equivalents with various major financial institutions. Concentrations of credit risk with respect to receivables are generally limited due to the Company's large number of customers and their dispersion across many countries and industries. At December 31, 2022 and 2021, the Company had no significant concentrations of credit risk.

Note 11 – Commitments, Contingencies, and Concentrations (continued)**Geographic Concentrations**

At December 31, 2022 and 2021, a significant percentage of the Company's cash and cash equivalents are held outside the United States. See the following table for the percentage of cash and cash equivalents by region at December 31, 2022 and December 31, 2021:

	December 31,	
	2022	2021
Asia	27 %	24 %
United States	17 %	13 %
Israel	28 %	25 %
Europe	13 %	18 %
United Kingdom	10 %	12 %
Canada	5 %	8 %
Total	100 %	100 %

Note 12 - Leases

The Company primarily leases office and manufacturing facilities in addition to vehicles, which have remaining terms of less than one year to fourteen years.

Leases recorded on the balance sheet consist of the following (*in thousands*):

Leases	December 31, 2022	December 31, 2021
Assets		
Operating lease right of use asset	\$ 24,342	\$ 27,764
Liabilities		
Operating lease - current	\$ 4,208	\$ 4,610
Operating lease - non-current	\$ 20,043	\$ 25,140

Other information related to lease term and discount rate is as follows:

	December 31, 2022
Operating leases weighted average remaining lease term (in years)	7.7 years
Operating leases weighted average discount rate	3.13 %

The components of lease expense are as follows (*in thousands*):

	Year Ended		
	December 31, 2022	December 31, 2021	December 31, 2020
Operating lease cost	\$ 5,098	\$ 5,185	\$ 4,389
Short-term lease cost	121	141	124
Sublease income	(423)	(220)	—
Total net lease cost	\$ 4,796	\$ 5,106	\$ 4,513

Right of use assets obtained in exchange for new operating lease liability during 2022 were \$1.2 million and in 2021 were \$10.7 million. The Company paid \$5.1 million for its operating leases for the year ended December 31, 2022 and \$5.1 million for the year ended December 31, 2021, which are included in operating cash flows on the consolidated statements of cash flows.

Undiscounted maturities of operating lease payments as of December 31, 2022 are summarized as follows (*in thousands*):

Note 12 - Leases (continued)

2023	\$	4,635
2024		3,980
2025		3,377
2026		2,988
2027		2,915
Thereafter		9,341
Total future minimum lease payments	\$	27,236
Less: amount representing interest		(2,985)
Present value of future minimum lease payments	\$	24,251

Note 13 – Segment and Geographic Data

VPG reports in three reportable segments: Sensors segment, Weighing Solutions segment, and Measurement Systems segment. The Sensors reporting segment is comprised of the foil resistor and strain gage operating segments. The Weighing Solutions segment is comprised of specialized modules and systems used to precisely measure weight, force torque, and pressure. The Measurement Systems reporting segment is comprised of highly specialized systems for steel production, materials development, and safety testing.

The chief operating decision maker ("CODM") is our chief executive officer. The evaluation of the segments performance is based on multiple performance measures including gross profits, revenues, and operating income, exclusive of certain items. Management believes that evaluating segment performance, excluding items such as restructuring and severance costs, impairment of goodwill and indefinite-lived intangible assets, acquisition costs, and other items is meaningful because they relate to occurrences or events that are outside of our core operations, and management believes that the use of these measures provides a consistent basis to evaluate our operating profitability and performance trends across comparable periods.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies (see Note 1). Reporting segment assets are the owned or allocated assets used by each segment. Products are transferred between segments on a basis intended to reflect, as nearly as practicable, the market value of the products.

Note 13 – Segment and Geographic Data (continued)

The following table sets forth reporting segment information (*in thousands*):

	<u>Sensors</u>	<u>Weighing Solutions</u>	<u>Measurement Systems</u>	<u>Corporate/ Other</u>	<u>Total</u>
<u>2022</u>					
Net third-party revenues	\$ 152,221	\$ 125,715	\$ 84,644	\$ —	\$ 362,580
Intersegment revenues	2,121	—	—	(2,121)	—
Gross profit	61,087	43,178	45,337	—	149,602
Segment operating income (loss)	41,671	21,232	18,399	(37,503)	43,799
Restructuring costs	1,460	—	58	—	1,518
Depreciation and amortization expense	5,816	3,343	4,308	1,886	15,353
Capital expenditures	11,515	7,094	1,324	18	19,951
Total assets	156,816	148,041	153,547	18,338	476,742

<u>2021</u>					
Net third-party revenues	\$ 127,861	\$ 125,390	\$ 64,668	\$ —	\$ 317,919
Intersegment revenues	3,487	—	—	(3,487)	—
Gross profit	45,474	45,900	33,768	—	125,142
Segment operating income (loss)	26,527	23,184	13,480	(35,819)	27,372
Acquisition costs	—	—	1,198	—	1,198
Impairment of goodwill and indefinite-lived intangibles	—	—	1,223	—	1,223
Restructuring costs	—	76	—	—	76
Depreciation and amortization expense	5,967	3,415	3,834	1,780	14,996
Capital expenditures	13,213	3,434	913	7	17,567
Total assets	142,510	152,399	159,816	7,164	461,889

<u>2020</u>					
Net third-party revenues	\$ 120,754	\$ 101,386	\$ 47,672	\$ —	\$ 269,812
Intersegment revenues	3,183	—	—	(3,183)	—
Gross profit	47,530	32,250	24,491	—	104,271
Segment operating income (loss)	29,486	12,145	11,763	(30,737)	22,657
Impairment of goodwill and indefinite-lived intangibles	—	—	2,440	—	2,440
Restructuring costs	551	234	51	82	918
Depreciation and amortization expense	5,227	3,291	2,653	1,336	12,507
Capital expenditures	21,885	1,961	468	13	24,327
Total assets	138,932	160,679	78,810	23,466	401,887

The “Corporate/Other” column for segment operating income (loss) includes unallocated selling, general, and administrative expenses and certain items which management excludes from segment results when evaluating segment performance, as follows (*in thousands*):

	Years ended December 31,		
	<u>2022</u>	<u>2021</u>	<u>2020</u>
Unallocated selling, general, and administrative expenses	\$ (35,985)	\$ (33,322)	\$ (27,379)
Acquisition costs	—	(1,198)	—
Impairment of goodwill and indefinite-lived intangibles	—	(1,223)	(2,440)
Restructuring costs	(1,518)	(76)	(918)
	<u>\$ (37,503)</u>	<u>\$ (35,819)</u>	<u>\$ (30,737)</u>

Note 13 – Segment and Geographic Data (continued)

The following geographic data includes property and equipment based on physical location (*in thousands*):

<i>Property and Equipment - Net</i>	December 31,	
	2022	2021
United States	\$ 12,651	\$ 12,255
United Kingdom	3,368	4,024
Other Europe	1,721	1,774
Israel	44,551	41,540
Asia	23,264	20,057
Canada and Other	1,572	1,570
	<u>\$ 87,127</u>	<u>\$ 81,220</u>

Note 14 – Earnings Per Share

Basic earnings per share are computed using the weighted average number of common shares outstanding during the periods presented. Diluted earnings per share is computed using the weighted average number of common shares outstanding, adjusted to include the potentially dilutive effect of stock options and restricted stock units (see Note 10), and other potentially dilutive securities.

The following table sets forth the computation of basic and diluted earnings per share attributable to VPG stockholders (*in thousands, except earnings per share*):

	Years ended December 31,		
	2022	2021	2020
Numerator:			
Numerator for basic and diluted earnings per share:			
Net earnings attributable to VPG stockholders	\$ 36,063	\$ 20,221	\$ 10,787
Denominator:			
Denominator for basic earnings per share:			
Weighted average shares	13,628	13,616	13,566
Effect of dilutive securities:			
Restricted stock units	60	41	57
Dilutive potential common shares	60	41	57
Denominator for diluted earnings per share:			
Adjusted weighted average shares	13,688	13,657	13,623
Basic earnings per share attributable to VPG stockholders	\$ 2.65	\$ 1.49	\$ 0.80
Diluted earnings per share attributable to VPG stockholders	\$ 2.63	\$ 1.48	\$ 0.79

Note 15 – Additional Financial Statement Information

The caption “Other” on the consolidated statements of operations consists of the following (*in thousands*):

	Years ended December 31,		
	2022	2021	2020
Foreign exchange gain/(loss)	\$ 3,579	\$ (110)	\$ (2,246)
Interest income	401	252	246
Pension expense	(241)	(468)	(738)
Other	(181)	96	(244)
	\$ 3,558	\$ (230)	\$ (2,982)

Foreign currency exchange gains and losses represent the impact of changes in foreign currency exchange rates. The change in foreign exchange gains / (losses) for the year ended December 31, 2022, as compared to the prior year period, is primarily due to fluctuations in the Israeli shekel, the Japanese yen and the British pound. The change in the dollar-shekel exchange rate resulted in a favorable currency exchange impact primarily related to the shekel-denominated lease liability for the Sensors facility in Israel.

Note 15 – Additional Financial Statement Information (continued)

The change in foreign exchange gains / (losses) for the year ended December 31, 2021, as compared to the prior year period, was primarily due to fluctuations in the Israeli shekel. The change in the dollar-shekel exchange rate in 2020 reflected an unfavorable currency exchange impact primarily related to the shekel-denominated lease liability for the Sensors facility in Israel. Additionally, in 2021, there were favorable foreign exchange impacts from the Japanese yen and the Canadian dollar.

Pension expense represents the net periodic benefit cost excluding the service cost.

Other accrued expenses consist of the following (*in thousands*):

	December 31,	
	2022	2021
Customer advance payments	\$ 7,983	\$ 4,765
Accrued restructuring	183	—
Goods received, not yet invoiced	2,523	2,998
Accrued taxes, other than income taxes	1,141	1,425
Accrued commissions	3,217	2,605
Accrued professional fees	1,360	1,336
Accrued technical warranty	740	761
Current accrued pension and other post retirement costs	505	709
Other	2,654	2,997
	\$ 20,306	\$ 17,596

Israeli Severance Pay

The Israeli Severance Pay Law, 1963 ("Severance Pay Law"), specifies that employees of our Israeli subsidiary are entitled to severance payment, following the termination of their employment. Under the Severance Pay Law, the severance payment is calculated as one month salary for each year of employment, or a portion thereof.

Part of the subsidiary's liability for severance pay is covered by the provisions of Section 14 of the Severance Pay Law ("Section 14"). Under Section 14, employees are entitled to monthly deposits, at a rate of 8.33% of their monthly salary, contributed on their behalf to their insurance funds. Payments in accordance with Section 14 release the subsidiary from any future severance payments in respect of those employees. As a result, the Company does not recognize any liability for severance pay due to these employees and the deposits under Section 14 are not recorded as an asset in the Company's balance sheet.

For the subsidiary's employees in Israel who are not subject to Section 14, the Company calculated the liability for severance pay pursuant to the Severance Pay Law based on the most recent salary of these employees multiplied by the number of years of employment as of the balance sheet date. The Company recorded as expenses the increase in the severance liability, net of earnings (losses) from the related investment fund. The subsidiary's liability was partially funded by monthly payments deposited with insurers and the value of these deposits is recorded as an asset on the Company's balance sheet. Any unfunded amounts would be paid from operating funds and are covered by a provision established by the subsidiary. The accompanying consolidated balance sheets at December 31, 2022 and December 31, 2021 include a \$7.0 million and \$8.4 million non-current liability, respectively, associated with Israeli severance requirements in other liabilities and a \$5.3 million and \$6.6 million non-current asset, respectively, associated with Israeli severance requirements in other assets.

Note 16 – Fair Value Measurements

ASC Topic 820, *Fair Value Measurements and Disclosures*, establishes a valuation hierarchy of the inputs used to measure fair value. This hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3: Unobservable inputs that reflect the Company's own assumptions.

Note 16 – Fair Value Measurements (continued)

An asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following tables provide the financial assets and liabilities carried at fair value measured on a recurring basis (*in thousands*):

As of December 31, 2022	Fair value measurements at reporting date using:			
	Total Fair Value	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
<u>Assets:</u>				
Assets held in rabbi trusts	\$ 5,427	\$ 53	\$ 5,374	\$ —

As of December 31, 2021	Fair value measurements at reporting date using:			
	Total Fair Value	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
<u>Assets:</u>				
Assets held in rabbi trusts	\$ 6,158	\$ 49	\$ 6,109	\$ —

The Company maintains nonqualified trusts, referred to as “rabbi” trusts, to fund payments under deferred compensation and nonqualified pension plans. Rabbi trust assets consist primarily of marketable securities, classified as available-for-sale money market funds at December 31, 2022 and December 31, 2021, and company-owned life insurance assets. The marketable securities held in the rabbi trusts are valued using quoted market prices on the last business day of the year. The company-owned life insurance assets are valued in consultation with the Company's insurance brokers using the value of underlying assets of the insurance contracts. The fair value measurement of cash and cash equivalents held in the rabbi trust is considered a Level 1 measurement and the measurement of the company-owned life insurance assets is considered a Level 2 measurement within the fair value hierarchy.

The fair value of the long-term debt, excluding capitalized deferred financing costs at December 31, 2022 and December 31, 2021 approximates its carrying value, as the revolving debt and term loans are reset monthly based on current market rates, plus a base rate as specified in the 2020 Credit Agreement. The fair value measurement of long-term debt is considered a Level 2 measurement.

The Company's financial instruments include cash and cash equivalents, accounts receivable, short-term notes payable, and accounts payable. The carrying amounts for these financial instruments reported in the consolidated balance sheets approximate their fair values.

Note 17 – Related Party Transactions

Following the spin-off from Vishay Intertechnology, Inc. on July 6, 2010, VPG is an independent, publicly-traded company, and Vishay Intertechnology does not retain any ownership interest in VPG, although a common group of stockholders control a significant portion of the voting power of each company and the companies have three common board members.

Subsequent to the spin-off, VPG and Vishay Intertechnology continue to share certain manufacturing locations. VPG owns one location in Japan at which it leases space to Vishay Intertechnology. Vishay Intertechnology owns one location in the United States, at which it leases space to VPG. Lease receipts and payments related to the shared facilities are immaterial.

Note 18 – Subsequent Events

Executive RSU grant

On February 28, 2023, VPG's three current executive officers were granted annual equity awards in the form of RSUs, of which 50% are performance-based and 50% are service-based. The awards have an aggregate target grant-date fair value of \$1.9 million and were comprised of 43,243 RSUs. The service-based awards will vest on January 1, 2026, subject to the executives continued employment. The performance-based awards will also vest on January 1, 2026, subject to the executives continued employment and the satisfaction of certain performance objectives relating to three-year cumulative “adjusted free cash flow” and net earnings goals.

SUBSIDIARIES OF THE REGISTRANT

Note: Name of Subsidiaries are indented under name of its parent. Subsidiaries are wholly owned unless otherwise noted. (Director's or other share required by statute in foreign jurisdictions and totaling less than 1% of equity are omitted).

Vishay Precision Foil, Inc.	Delaware
Vishay Precision Foil GmbH	Germany
Vishay Measurements Group GmbH	Germany
Powertron GmbH	Germany
Vishay Measurements Group, Inc.	Delaware
Vishay Transducers, Ltd. ^(a)	Delaware
Vishay Transducers India Private Limited	India
Pharos de Costa Rica, S.A.	Costa Rica
Vishay Celtron Technologies, Inc.	Taiwan
Vishay Precision España S.L.	Spain
Vishay Precision Asia Investments Pte., Ltd.	Singapore
Vishay Precision Measurement Trading (Shanghai) Co., Ltd.	China
Vishay Celtron (Tianjin) Technologies Co., Ltd.	China
Vishay Precision Foil K.K.	Japan
Alpha Electronics Corp.	Japan
Pacific Instruments, Inc.	California
DSI Holdings DE Inc.	Delaware
Dynamic Systems Inc.	New York
DSI Europe GmbH	Germany
Diversified Technical Systems, Inc.	California
Vishay Precision Israel Ltd.	Israel
Vishay Measurements Group UK Ltd.	England and Wales
Vishay Advanced Technologies Ltd.	Israel
Vishay Precision Transducers India Private Limited	India
Vishay Measurements Group France S.A.S.	France
SCI Vijafranc	France
VPG Systems UK, Ltd.	England and Wales
Vishay Precision Group Canada ULC ^(b)	Canada
Vishay PM Onboard (Ireland) Limited	Ireland
Vishay PME France SARL	France
Vishay PM Onboard Limited	England and Wales
Vishay Nobel AB	Sweden
Vishay Nobel AS	Norway

(a) Registrant has a direct ownership interest of 62% in Vishay Transducers, Ltd.

(b) VPG Systems UK, Ltd. owns 80% and Vishay Transducers, Ltd. owns 20% of Vishay Precision Group Canada ULC

**CONSENT OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement Nos. 333-187211 and 333-265228 on Form S-8 of our reports dated March 1, 2023, relating to the financial statements of Vishay Precision Group, Inc. (the "Company") and the effectiveness of the Company's internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ Brightman Almagor Zohar & Co.
Brightman Almagor Zohar & Co.
A Firm in the Deloitte Global Network

Tel Aviv, Israel

March 1, 2023

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ziv Shoshani, certify that:

1. I have reviewed this Form 10-K of Vishay Precision Group, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 1, 2023

/s/ Ziv Shoshani

Ziv Shoshani

Chief Executive Officer

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, William M. Clancy, certify that:

1. I have reviewed this Form 10-K of Vishay Precision Group, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 1, 2023

/s/ William M. Clancy

William M. Clancy

Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Vishay Precision Group, Inc. (the “Company”) on Form 10-K for the fiscal year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Ziv Shoshani, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 1, 2023

/s/ Ziv Shoshani

Ziv Shoshani

Chief Executive Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Vishay Precision Group, Inc. (the “Company”) on Form 10-K for the fiscal year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, William M. Clancy, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 1, 2023

/s/ William M. Clancy

William M. Clancy
Chief Financial Officer

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Corporate Address:

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3 Great Valley Parkway, Suite 150
Malvern, PA 19355