

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

(Mark One)

Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934

for the fiscal year ended 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 0-21810

GENTHERM INCORPORATED

(Exact name of registrant as specified in its charter)

Michigan
(State or other jurisdiction of
incorporation or organization)
21680 Haggerty Road, Northville, MI
(Address of principal executive offices)

95-4318554
(I.R.S. Employer
Identification No.)

48167
(Zip Code)

Registrant's telephone number, including area code: (248) 504-0500

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, no par value	THRM	Nasdaq

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

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

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

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

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 registrant's Common Stock held by non-affiliates of the registrant, computed by reference to the closing price of such Common Stock on The Nasdaq Global Select Market as of the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2022, was \$2,049,990,444. For purposes of this computation, the registrant has excluded the market value of all shares of its Common Stock reported as being beneficially owned by executive officers and directors; such exclusion shall not, however, be deemed to constitute an admission that any such person is an "affiliate" of the registrant.

As of February 17, 2023, there were 33,208,973 issued and outstanding shares of Common Stock of the registrant.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the 2023 annual meeting of shareholders are incorporated by reference into Part III of this Annual Report to the extent described herein.

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Forward-Looking Statements

This Annual Report on Form 10-K for the year ended December 31, 2022 (this “Annual Report”) contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements represent our goals, beliefs, plans and expectations about our prospects for the future and other future events, such as: the expected light vehicle production in the Company’s key markets; the integration of recent acquisitions; the impact of macroeconomic and geopolitical conditions; the components of and our ability to execute our updated strategic plan; long-term consumer and technological trends in the Automotive industry and our related market opportunity for our existing and new products and technologies; the competitive landscape; the sufficiency of our cash balances and cash generated from operating, investing and financing activities for our future liquidity and capital resource needs; and our ability to finance sufficient working capital. Reference is made in particular to forward-looking statements included in “Item 1. Business,” “Item 1A. Risk Factors” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.” Such statements may be identified by the use of forward-looking terminology such as “may”, “will”, “expect”, “believe”, “estimate”, “anticipate”, “intend”, “continue”, or similar terms, variations of such terms or the negative of such terms.

The forward-looking statements included in this Annual Report are made as of the date hereof or as of the date specified and are based on management’s reasonable expectations and beliefs. Such forward-looking statements are subject to a number of important assumptions, significant risks and uncertainties (some of which are beyond our control) and other factors that may cause the Company’s actual results or performance to differ materially from that described in or indicated by the forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to those summarized below:

- macroeconomic, geopolitical and similar global factors on the cyclical Automotive industry;
- the production levels of our major customers and OEMs in our key markets and sudden fluctuations in such production levels, in particular with respect to models for which we supply significant amounts of product;
- our ability to integrate our recent acquisitions and realize synergies, as well as to consummate additional strategic acquisitions and investments;
- our ability to effectively manage new product launches and research and development;
- increasing competition, including with non-traditional entrants;
- the ongoing supply-constrained environment, including raw material and component shortages, manufacturing disruptions and delays, logistics challenges, inflationary and other cost pressures, and our resulting increased inventory;
- the impact of our global operations, including our global supply chain, operations within Ukraine, economic and trade policies by various jurisdictions, and foreign currency risk and foreign exchange exposure;
- a tightening labor market, labor shortages or work stoppages impacting us, our customers or our suppliers;
- our achievement of product cost reductions to offset customer-imposed price reductions or other pricing pressures;
- any security breaches and other disruptions to our information technology networks and systems, as well as privacy, data security and data protection risks;
- our product quality and safety;
- the evolution of the automotive industry towards electric vehicles, autonomous vehicles and mobility on demand services, and related consumer behaviors and preferences;
- the development of and market acceptance of our existing and future products;
- our borrowing availability under our revolving credit facility, as well ability to access the capital markets, to support our planned growth;
- our increased level of indebtedness and compliance with our debt covenants;

- *the effects of climate change and catastrophic events, as well as regulatory and stakeholder-imposed requirements to address climate change and other sustainability issues;*
- *our efforts to optimize our global supply chain;*
- *our ability to project future sales volume based on third-party information, based on which we manage our business;*
- *our ability to convert new business awards into product revenues;*
- *any loss or insolvency of our key customers and OEMs, or key suppliers;*
- *risks associated with our manufacturing processes;*
- *the extensive regulation of our patient temperature management business;*
- *the protection of our intellectual property in certain jurisdictions;*
- *our compliance with anti-corruption laws and regulations;*
- *legal and regulatory proceedings and claims involving us or one of our major customers; and*
- *other risks, uncertainties and other factors set forth in “Item 1A. Risk Factors” and elsewhere in this Annual Report, and subsequent reports filed with or furnished to the U.S. Securities and Exchange Commission.*

In addition, with reasonable frequency, we have entered into business combinations, acquisitions, divestitures, strategic investments and other significant transactions. Such forward-looking statements do not include the potential impact of any such transactions that may be completed after the date hereof, each of which may present material risks to the Company’s business and financial results. Except as required by law, we expressly disclaim any obligation or undertaking to update any forward-looking statements to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

ITEM 1. BUSINESS

Unless otherwise indicated, references to “Gentherm”, “the Company”, “we”, “our” and “us” in this Annual Report refer to Gentherm Incorporated and its consolidated subsidiaries.

Except to the extent expressly noted herein, the content of our website or the websites of other third parties noted herein are not incorporated by reference in this Annual Report.

Overview

Gentherm Incorporated is the global market leader of innovative thermal management and pneumatic comfort technologies for the automotive industry. Automotive products include variable temperature Climate Control Seats, heated automotive interior systems (including heated seats, steering wheels, armrests and other components), battery performance solutions, cable systems, lumbar and massage comfort solutions, valve system technologies, and other electronic devices. Medical products include patient temperature management systems. The Company is also developing a number of new technologies and products that will help enable improvements to existing products and will lead to new product applications for existing and new markets. Our automotive products can be found on vehicles manufactured by nearly all the major original equipment manufacturers (“OEMs”) operating in North America and Europe, and several major OEMs in Asia. We operate in locations aligned with our major customers’ product strategies to provide locally enhanced design, integration and production capabilities.

On July 13, 2022, Gentherm acquired Jiangmen Dacheng Medical Equipment Co. Ltd (“Dacheng”), a manufacturer of medical materials and medical equipment, including patient temperature management solutions. The acquisition was accounted for as a business combination within our Medical segment.

On August 1, 2022, Gentherm acquired Alfmeier Präzision SE (“Alfmeier”), a global leader in automotive lumbar and massage comfort solutions and a leading provider of advanced valve systems technology, integrated electronics and software. The acquisition was accounted for as a business combination within our Automotive segment.

We are incorporated under the laws of the State of Michigan. Our website is www.gentherm.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are made available free of charge through our website, www.gentherm.com, as soon as reasonably practicable after we electronically file them with or furnish them to the Securities and Exchange Commission (“SEC”). These reports are also available on the SEC’s website, www.sec.gov.

Impact of Supply Chain Disruptions and Other Matters

Our sales are driven by the number of vehicles produced by the automotive manufacturers, which is ultimately dependent on consumer demand for automotive vehicles, and our content per vehicle, and other factors that may limit or otherwise impact production by us, our supply chain and our customers. According to the forecasting firm S&P Global Mobility (February 2023 release), global light vehicle production in 2022 in the Company’s key markets of North America, Europe, China, Japan and Korea, was up 4.7%, as compared to 2021. The production growth in 2022 primarily is due to the significant decrease in vehicle production in 2020 that was driven by the adverse impacts of the COVID-19 pandemic continuing into 2021, and the impacts of the 2021 global supply chain disruptions, including the worldwide semiconductor supply shortage.

In 2022 and 2021, the Company’s semiconductor suppliers, along with most automotive component supply companies that use semiconductors, including Gentherm, were unable to fully meet the vehicle production demands of the OEMs largely due to events outside the control of the Company and its suppliers and customers, as well as the automotive industry generally. Supply shortages of semiconductor chips and other components not only resulted in decreased global automotive vehicle production but also caused significant volatility in customer vehicle production schedules. Sudden changes in the production schedules of OEMs and Tier 1s resulted in operating inefficiencies that adversely affected our profitability and results of operations. In addition, we experienced inflationary cost increases in certain component parts, raw materials, labor and transportation as a result of the supply-constrained environment and general economic conditions. While these broad-based operational and inflationary impacts are easing, they continued to impact the Company’s financial condition, results of operations and cash flows as of this filing.

In response to the global supply chain instability and inflationary cost increases, the Company has taken several actions to reduce any potential and actual adverse impacts by working closely with its suppliers and customers to closely monitor the availability of semiconductor microchips and other component parts and raw materials, customer vehicle production schedules and any other supply chain inefficiencies that may arise. We expect global supply chain instability will continue to have an adverse impact on our business and financial performance for the foreseeable future, and such adverse impact may be material. The consequences of macroeconomic and geopolitical conditions, global supply chain instability and inflationary cost increases and their adverse impact to the global economy continue to evolve. Accordingly, the significance of the future adverse impact on our business and financial statements remains subject to significant uncertainty.

See further discussion of risks in Item 1A, “Risk Factors” and Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this Annual Report.

Segments

The Company has two reportable segments for financial reporting purposes: Automotive and Medical.

Automotive

The Automotive reporting segment is comprised of the results from our global automotive businesses, including the design, development, manufacturing and sales of automotive climate comfort systems, automotive cable systems, battery performance solutions, lumbar and massage comfort solutions, valve system technologies, and automotive electronic and software systems.

Climate comfort systems include seat heaters, blowers and thermoelectric devices for variable temperature Climate Control Seats® (“CCS”) and steering wheel heaters designed to provide individualized thermal comfort to automobile passengers, and integrated electronic components, such as electronic control units that utilize our proprietary electronics technology and software. Other climate comfort systems include neck and shoulder conditioners and climate control system products for door panels, armrests, cup holders and storage bins.

Automotive cable systems include ready-made individual cables and ready-to-install cable networks used to connect automotive components to power sources.

Battery performance solutions consist of cell connecting devices and battery cable technologies used for various types of automotive batteries and thermal management products for heating or cooling 12 volts, 48 volts and high voltage batteries and battery modules.

Lumbar and massage comfort solutions include lumbar support, side bolster adjustment, multi-contour seats and massage systems that can be regulated according to the vehicle occupant.

Valve system technologies consist of applications that offer solutions in fuel management, ranging from the design of tank ventilation and filling functions to the closed-coupled fuel regulation. The modular systems allow for customizable adaptations.

Automotive electronic and software systems include electronic control units for climate comfort systems, electronic control units for memory seat modules and other devices.

Medical

The Medical reporting segment is comprised of the results from the patient temperature management business in the medical industry.

Patient temperature management includes temperature management systems across multiple product categories addressing the needs of hyper-hypothermia therapy in intensive care, normothermia in surgical procedures and additional warming/cooling therapies utilized in acute care, ambulatory, clinics and home health.

Business Strategy

Globally, we develop, manufacture, and deliver differentiated solutions for automotive and patient thermal management markets that make meaningful differences in everyday life by improving health, wellness, comfort and energy efficiency.

We recently updated our business strategy, which consists of four major pillars:

Leverage World Class Talent and Culture

We have built a remarkably talented global team by ingraining throughout the organization four Winning Culture Behaviors: Customer Focus, Global Mindset, Employee Engagement & Inclusion, and Performance & Accountability. Combined with DE&I as a cornerstone of the company, we have laid a strong foundation for future growth across the company.

Extend Technology Leadership

We will continue to expand our technology leadership with focused investments in key core technologies and competencies, including advanced sensing, human-centric science-based design, system engineering, and software and electronics.

Focused Growth

The focused growth strategy includes four key goals:

- Accelerate thermal comfort growth by leveraging human thermophysiology and smart ClimateSense® control algorithms to increase personalized passenger comfort and improve energy efficiency;
- Grow pneumatic comfort business by leveraging the thermal products market share and customer relationships, as well as introducing products and technologies featuring the benefits of combined thermal and pneumatic solutions;
- Drive battery performance solutions with an increased focus on gaining a foothold in cell connecting market with our innovative and environmentally friendly flex foil solution, as well continuing to solve customer challenges with battery heating and cooling solutions; and
- Expand patient thermal solutions that leverage our expertise in thermophysiology and drive synergies from our automotive climate and comfort businesses, as well as introducing new products and technologies.

These areas of the focused growth strategy are underpinned and enabled by our electronic and software systems.

Deliver Financial Excellence

We will continue to build a culture of performance that includes a focus on high-return growth opportunities. In recent years, we undertook restructuring actions to reduce global overhead costs to improve Selling, general and administrative expenses. We are

continuing to strengthen our operational discipline and striving to expand margins and return on invested capital through manufacturing productivity, sourcing excellence and cash flow generation.

Research, Development and Partnerships

Our research, development and partnerships activities are an essential part of our efforts to develop new or improved innovative products. Through both internal and external programs, we are working to develop a comprehensive knowledge of thermal management and pneumatic comfort systems that demonstrates functionality and performance. These activities are critical to optimize energy utilization and production efficiencies, improve effectiveness in our products and minimize the cost to integrate our products with those of our customers.

We perform advanced research and development on thermal and pneumatic comfort technologies, including thermal management systems that utilize new proprietary comfort software algorithms, to enhance the efficiency and functionality of our automotive heating and cooling products. We believe there are substantial opportunities to expand our human-centric value proposition beyond thermal in comfort, health and wellness, through the integration of pneumatic comfort technologies.

To offer our customers cutting-edge products and technologies, our strategy includes partnering with key technology leaders in our industry. Our advanced partnership with global automakers and manufacturers address and work to solve industry preferences of today and tomorrow by leveraging our expertise in human thermophysiology and physiotherapy.

Research and development is conducted globally and predominantly at our world headquarters in Northville, Michigan, our Technology Center in Farmington Hills, Michigan, our European research facility in Odelzhausen, Germany and our Asian research facility in Shanghai, China.

Product design and development also is performed at all of our manufacturing facilities to support our geographically diverse customers. We believe the localized development model employed at our manufacturing facilities improves our ability to effectively serve our customers and increases our innovative capacity.

Core Technologies

In Automotive, Gentherm is the global market leader of innovative thermal management and pneumatic comfort technologies. For our Medical business, our expertise in thermal management is focused on managing the thermal conditions of people.

ClimateSense®

ClimateSense® is an integrated comfort system we are designing to create a personalized microclimate for passengers using localized convective, conductive and radiative heating and cooling products. Using automatic regulation technology in combination with our unique occupant-centric control algorithm, ClimateSense® offers the ability to personalize and improve overall occupant thermal comfort, improve time to comfort with (all-electric) pre-conditioning, provide comfort with less energy consumption thereby lowering greenhouse gas emissions by conventional internal combustion and hybrid powertrains, and extend range for electrified powertrains through a reduction in central heating, ventilation and air conditioning (“HVAC”) system usage. In July 2021, we received the first production vehicle award for our ClimateSense® technology that will launch on the all-new 2024 Cadillac CELESTIQ. In June 2022, we received our second ClimateSense® technology award on a battery electric version of a popular SUV launching in 2025 and is a strong validation of the progress we are making with General Motors.

Electronics

The electronics in our core climate comfort solution products are manufactured by us. We also supply value-added electronic products to third parties for adjacent areas within the automotive interior. In addition, Gentherm manufactures and supplies electronic control units for memory seat modules that include electric motor position sensing technology. This technology further applies to other automotive products requiring fine motor controls.

Air Moving Devices

Our highly durable and quiet air moving devices, some of which include our proprietary blower and fan designs, are essential to all of our products that require air movement. We have a broad portfolio of these products that are tailored to various automotive applications, including seat ventilation and electric vehicle battery cooling.

Thermoelectric Technologies

Many of our thermal products manage the thermal conditions of people using our internally developed advanced thermoelectric device technology (“TED”). A TED is a solid-state circuit that has the capability to produce both hot and cold thermal conditions by use of the Peltier effect. The advantages of advanced TED over conventional compressed gas systems include a reduced environmental impact and less complexity as they have no moving parts and are compact and light weight. Our work on this technology has yielded improvements in areas of functionality, efficiency, durability and performance.

Resistive Heaters

Resistive heater technologies are comprised of wire, carbon fiber or positive thermal coefficient (“PTC”) heating elements that quickly and effectively deliver heat to people and objects. Wire heating elements are designed from stainless steel, copper, our proprietary carbon fiber woven lattice technology called Carbotex® or printed circuit PTC heaters based on the specifications for a particular product application. Resistive heaters have multiple automotive applications, including seat heating, steering wheel heating, interior panel heating and battery heating.

Pneumatic

Pneumatic massage and lumbar operate by inflation and deflation of air bladders to achieve desired comfort effect. Our products' differentiation is that our underlying technology is based on shape memory alloy valves (“SMA”). Gentherm has developed actuators and valves with SMA technology that replace heavy, noisy and less accurate electromagnetic valves. Our innovative control elements produce precise mechanical forces and movements using the finest wires made of memory metals and without the labor-intensive use of additional sensors.

Products

Climate Comfort Solutions – Seat Comfort

CCS

Gentherm offers a range of CCS products utilizing proprietary technologies for regulating temperature and enhancing the comfort of vehicle passengers. Our ventilated CCS products move air through the seat to provide conditioning. Our active CCS products utilize TEDs to heat and cool air used to condition the seat. The conditioning air circulates by one of our specially designed air moving devices through an air distribution system installed in the seat cushion and seat back, so that the seat surface can be heated, ventilated or cooled. Each seat has individual electronic controls to adjust the level of heating, ventilating or cooling. Our CCS products improve comfort compared with conventional vehicle cabin air conditioners by focusing heating and cooling directly on the passenger through the seat. Our CCS products can be combined with our resistive heating elements to increase heating capacity and reduce time to comfort.

By offering different models of the CCS product, our customers have the opportunity to purchase a wider range of climate control products at different price points. Sales of CCS products, primarily ventilated CCS products, contributed 35%, 38% and 38% to our total product revenues for the years ended December 31, 2022, 2021 and 2020, respectively.

Heated Seat

Heated seats, based on our resistive heater core technology, are seamlessly integrated into automotive seat designs, and are constructed using materials that offer the best capacity, installation characteristics and durability. Our design and manufacturing capabilities allow customers to choose among a variety of resistive heater materials based on their individual vehicle specifications. Sales of heated seat products contributed 24%, 26% and 27% to our total product revenues for the years ended December 31, 2022, 2021 and 2020, respectively.

Intelligent Neck Conditioner

Intelligent neck conditioning systems ventilate warm or temperature-controlled air directly onto the passenger’s neck and shoulder area. The system combines electronics, air moving device technologies and a heating element into a compact, integrated headrest design that can be adjusted to suit the body size of the passenger.

Climate Comfort Solutions – Surface Climate Control Systems

Heated Steering Wheel

Heated steering wheels deliver heating comfort to automobile drivers through resistive elements. This product can be applied to both leather and wood steering wheels. A solution for drivers in cold and mild weather climates, the heated steering wheel is designed for the global automotive market.

Heated Surfaces

Gentherm's thermally conductive or radiative surfaces, such as door panel armrest and center console armrest products, are powered by our core technologies. The system is thermally managed by a heating control system which can be discretely located in the door panel or seat of the vehicle. Heated door panels and armrests complement our climate-controlled seat and steering wheel products and provide a superior level of thermal comfort to the driving experience.

Pneumatic Seat Massage

Gentherm's seat ergonomics system consists primarily of pneumatic lifting elements (air bladders) which are mounted under the surface of seat cushion and back. Through the cyclical inflation and deflation of the lifting elements, the contour of the seat cushion is selectively modified. The lifting elements are controlled by valves, utilizing software that can be enabled in modes by the vehicle occupant in accordance with their preferences and specific body types.

Electronics Solutions

Memory Seat Modules

Gentherm has developed a unique way to control certain electrical motors in a vehicle. Our Intelligent Positioning System, IPS[®] product suite utilizes proprietary software to determine the position of a power seat and control the memory seat module.

Hands-On Detection

All vehicles manufactured with autonomous driving level 2 or higher capabilities are required to ensure that the driver stays in control of the vehicle during operation. In order to accomplish this task, Gentherm developed PilotSense[™] – a sensor integrated into the steering wheel that monitors whether the driver's hands are maintaining contact with the steering wheel. This product is available for both heated and non-heated steering wheels.

Battery Performance Solutions

Cell Connecting Systems

Cell connecting systems provide secure connections between advanced automotive batteries to transmit a continuous flow of information about battery temperature and cell voltage during the charging and discharging process to monitor battery system performance. Gentherm has developed a range of cell connecting system products, including flexible foil cell connecting boards that offer improved packaging, weight and functionality. We offer these products in a variety of materials to cover customers' requirements.

Thermoelectric Battery Thermal Management

Thermal management is critically important for the long-term operation of advanced automotive batteries. The expansion of electrified vehicle applications, such as electric vehicles, plug-in hybrids and mild hybrids, have increased the demand for battery thermal management ("BTM") systems that enable wider operating temperature ranges, enhanced driving range and prolonged life of the battery. Gentherm's BTM system can provide precision battery cooling of 48-volt mild hybrid systems on pack or cell-level using patented TED technology. The BTM system maintains the temperature of the lithium-ion battery or other advanced chemistry battery within an acceptable temperature range without the use of chilled liquids or refrigerant loops, making it a light weight, highly scalable, compact solution ideal for automotive applications. Gentherm's proprietary BTM system is compact and energy efficient, resulting in a minimal energy usage, which is important for an electrified vehicle.

Aside from battery cooling, Gentherm's BTM portfolio includes battery heating applications. Based on our proprietary technology, we offer solutions to our customers that enable efficient heating of lithium-ion batteries for most electrified vehicles.

Climate Comfort Solutions – Thermal Convenience

TrueTherm™ Cup Holder

The TrueTherm™ Cup Holder applies Gentherm's patented TED technologies to keep beverages of automobile drivers and passengers either warm or cool. We have developed a range of cup holder models with varying degrees of functionality, designed to be manufactured in multiple configurations to accommodate different console environments. Our dual independent design provides separate temperature settings in each holder allowing the driver and passenger to individually maintain a heated or cooled beverage.

TrueTherm™ Storage Unit

Gentherm's TrueTherm™ Storage Unit provide for food or beverage cooling for the global automotive market. Using patented TED or refrigeration technologies, the TrueTherm™ Storage Unit provides temperature control independently from a vehicle's heating and air conditioning system. It can be custom designed to accommodate tight interior spaces, such as the front floor console of a sport utility vehicle and provide additional cooling capacity to those who have long work commutes or transport multiple passengers.

Automotive Cable Systems

Gentherm manufactures automotive cable systems used to connect automotive components to power sources. The automotive cable systems are an important element in the production of many of our products and form a significant component in how we generate value to our customers by being an efficient, low-cost and high-quality manufacturer. We offer cable systems as integrated parts of our products and also as stand-alone components for other automotive applications, such as oxygen sensors. Our cable systems business includes both ready-made individual cables and ready-to-install cable networks.

Valve Systems Technology

Gentherm has deep expertise in automotive fluid management, providing intelligent solutions for applications such as fuel supply, servo assistance, flap control, crank case ventilation and thermal management. We have many years of experience in precision injection molding and valve technology, which include innovative technologies such as the SMA actuating elements. Due to our modular systems, we implement customized adaptations at attractive costs and are prepared to address future global regulatory emissions requirements.

Patient Temperature Management Systems

Gentherm aspires to provide healthcare professionals with superior temperature management solutions and clinical expertise that improve patient outcomes, increase the standard of care and enhance patient satisfaction. We provide a full line of patient temperature management systems that utilizes air, water and resistive technologies across multiple product categories addressing the needs of hyper-hypothermia therapy in intensive care, normothermia in surgical procedures and additional warming/cooling therapies utilized in acute care settings, medical clinics and home health. Our core brands include Blanketrol®/Kool-Kit® hyper-hypothermia system, WarmAir®/FilteredFlo® convective warming system, ASTOPAD® resistive patient warming system (leveraging technology used in our automotive products), Electri-Cool®/Micro-Temp® localized cooling/warming systems, ASTOTHERM®/ASTOFLO® IV fluid and blood warming systems, and Hemotherm® cardiovascular cooling/warming system that delivers precise blood temperature control during cardiopulmonary by-pass and other related cardiovascular procedures.

Automotive Customers

Our Automotive segment customers include primarily light vehicle OEMs and Tier 1s, including automotive seat manufacturers. We also directly supply CCS products to aftermarket seat distributors and installers.

The Company's automotive marketing is directed primarily at the OEMs and their Tier 1s and focuses on the enhanced value consumers attribute to vehicles with thermal and pneumatic solutions. In many cases, the OEMs direct us to work with their suppliers, primarily their Tier 1s, to integrate our products into the vehicle's seat or interior design.

Once the integration work is complete, prototypes are sent to the OEMs for evaluation and testing. If an OEM accepts our product, a program can then be launched for a particular model on a production basis, but it normally takes one to three years from the time an OEM decides to include any of our products in a vehicle model to actual production for that vehicle. During this process, we derive funding from prototype sales but obtain no significant revenue until mass production begins. Upon commencement of mass production, our products are sold by Tier 1s to the OEMs. Inherent to the automotive supplier market are costs and commitments that are incurred well in advance of the receipt of orders and resulting revenues from customers.

The volume of products we sell is significantly affected by global and regional automotive production levels and the general business conditions in the automotive industry. Our product revenues are generally based upon purchase orders issued by our customers, with updated production schedules for volume adjustments. As such, we typically do not have a backlog of firm orders at any point in time. Once we are selected to supply products for a particular platform, we typically supply those products for the platform life, which is normally five to seven years, although there is no guarantee that this will occur. In addition, when we are the incumbent supplier to a given platform, we believe we have a competitive advantage in winning the redesign or replacement platform, although there is no guarantee that this will occur.

For 2022, our revenues from sales to our two largest customers, Lear Corporation (“Lear”) and Adient plc (“Adient”) were \$189 million and \$179 million, respectively, representing 16% and 15% of our product revenues, respectively. Revenues from Lear and Adient represent sales of our climate comfort and pneumatic comfort products. Lear acquired the Interior Comfort Systems business unit of Kongsberg Automotive ASA (“Kongsberg”) in February 2022, and entered into an agreement to acquire I.G. Bauerhin (“IGB”) in May 2022, which are both key competitors of the Company’s climate comfort and pneumatic comfort products. In 2022 we believe there was an immaterial impact to our business as a result of the Kongsberg acquisition. Lear has expressed an intent to become a leading provider of thermal comfort solutions as part of a vertical integration strategy, and the magnitude of the future adverse impact on our business and financial statements remains subject to significant uncertainty.

The loss of or significant reduction of business from Lear or Adient would likely have a material adverse impact on our business, results of operations and cash flows. However, as noted above, in many cases automotive OEMs direct their suppliers such as Lear and Adient to work with us for our climate comfort solutions, pneumatic comfort solutions, battery performance solutions and cable technology products. It is, therefore, relevant to understand how our revenues are divided among the OEMs, as shown below.

Our total product revenues for each of the past three years were divided among the OEMs as follows:

	2022	2021	2020
General Motors	15%	14%	14%
Hyundai	11%	13%	12%
Volkswagen	9%	10%	9%
Ford Motor Company	8%	8%	9%
Stellantis ^(a)	8%	8%	9%
BMW	7%	6%	6%
Daimler	7%	5%	6%
Honda	4%	5%	6%
Mazda	3%	3%	3%
Jaguar/Land Rover	3%	2%	3%
Toyota Motor Corporation	2%	3%	3%
Renault/Nissan	2%	3%	2%
Other (including Medical)	21%	20%	18%
Total	100%	100%	100%

(a) Reflective of the 2021 merger of Peugeot S.A. and Fiat Chrysler Automobiles N.V.

Automotive Market Trends

The Gentherm automotive product portfolio aligns well with near-term and long-term consumer and technological trends:

- Increased efficiency and electric range – Our solutions, including the ClimateSense® and pneumatic comfort systems that we continue to develop, help reduce weight and overall energy consumption of a vehicle, resulting in improved fuel consumption for vehicles with an internal combustion engine, and increased range for electric vehicles. Our

Battery Performance Solutions products help improve the life and efficiency of batteries, contributing to increased adoption of powertrain electrification.

- Increased demand for comfort products – We believe increased consumer demand for personalized comfort in a vehicle is driving increased adoption of our thermal and pneumatic comfort products. We are striving continuously to bring to market products and technologies that improve the well-being of vehicle occupants. From improved performance of our seat heating and cooling devices, to our introduction of the neck climate control system, heated surface products, and pulsating massage treatment – our focus is to make vehicle comfort an integral part of vehicle occupants' experience. In recent years, we are seeing a trend of equipping second, and in some cases, third row seats with thermal management solutions. This trend is accelerating in all major markets where Gentherm is present, including North America, Europe, Japan, Korea and China.
- Growth of connected/smart devices – One of the most important objectives in achieving comfort is to create a system that is able to sense the needs of vehicle occupants and make performance adjustments based on personalized needs. We utilize machine learning to create and optimize state of the art algorithms to make our products smarter and more advanced with each generation.
- Focus on health and wellness – Consumers have an increased focus on personal health and wellness. Our technologies are at the nexus of health, wellness and comfort, where our solutions adjust to enable vehicle occupants to address their health and wellness needs.
- Emergence of shared mobility – As the world transitions from vehicle ownership to mobility as a service model, our focus on individual personalized comfort becomes even more important. Our focus is to create microclimate solutions, in which each vehicle occupant can create a personalized thermal experience tailored to individual needs.

Production and Suppliers

Our global manufacturing and distribution facilities are located close to our key customers. In Automotive, we operate four manufacturing sites in Europe located within North Macedonia, Ukraine, Germany and Czech Republic and one distribution center located in Hungary. In North America, we operate three manufacturing sites in Mexico and one manufacturing site in the United States. In Asia, we operate three manufacturing sites in China and one in Vietnam, and one distribution center in South Korea.

For Medical, we operate three manufacturing sites within China, Germany and the United States.

We procure our raw materials from a variety of suppliers around the world. In the normal course of business, we do not carry substantial inventories of these raw materials in excess of levels reasonably required to meet our near-term production requirements. The automotive industry is highly reliant on semiconductors and there has been a supply shortage of semiconductors since 2021. See further discussion of the risks relating to the supply shortage of semiconductors and related risks, as well as certain mitigating activities we have undertaken, above in “—Impact of Supply Chain Disruptions and Other Matters”, in Item 1A, “Risk Factors” and Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this Annual Report.

Proprietary Rights and Patents

The development of new or improved technologies is critical to the execution of our business strategy. Currently owned patents and patents obtained for new or improved technologies form an important basis for the success of the Company and underpin the success of our research and development efforts. We have adopted a policy of obtaining, where practical, the exclusive rights to use technology related to our products through patents or licenses for proprietary technologies or processes. We adapt and commercialize such technologies in products for mass production. We also have developed technologies or furthered the development of acquired technologies through internal research and development efforts.

As of December 31, 2022, Gentherm held 531 issued patents, of which 261 were U.S. patents and 270 were non-U.S. patents. Gentherm held 265 patents directed to climate control products and thermoelectric technologies (including 5 patents directed to ClimateSense®), 74 patents directed to battery cell connecting and cable technologies, 44 patents directed to massage and lumbar technologies, 37 patents directed to air moving devices, 34 patents directed to medical technologies, 30 patents directed to heating elements and technologies, 24 patents directed to occupant sensing technologies, 18 patents directed to fluid valve technologies, and 5 patents directed to electronics technologies. The Company continued to evaluate its patents during 2022 and made strategic decisions

to reduce low-value patents and patents unrelated to current or planned business strategies. The acquisitions of Alfmeier and Dacheng added 68 issued patents to the Company’s patent portfolio.

Competition

Gentherm faces competition from other automotive suppliers and, with respect to certain products, from the OEMs and Tier 1s who manufacture or have the capability to manufacture certain products that Gentherm manufactures and supplies. The automotive supply industry competes on the basis of technology, quality, reliability of supply and price. Design, engineering capability and competitive pricing are increasingly important factors. Although the overall number of our automotive competitors has decreased due to ongoing industry consolidation, the automotive technology and components industry remains extremely competitive. The competitive landscape for patient temperature management systems includes patient thermal management medical device manufactures.

We believe our expertise in core thermal management and pneumatic comfort technologies, as well as our capability in applying specific component design, global footprint and broad product offerings make us well positioned to compete against the traditional thermal management systems and pneumatic comfort suppliers, global Tier 1s and component specialists.

See further discussion of the risks relating to competition in Item 1A, “Risk Factors” in this Annual Report.

Seasonality

Our principal operations are directly related to the automotive industry. Consequently, we have historically experienced seasonal fluctuations to the extent automotive vehicle production slows, such as in the summer months when many customer plants close for model year changeovers and in December when many customer plants close for the holidays.

Human Capital Management

Employees

At Gentherm, our mission is to “create and deliver extraordinary thermal solutions that make meaningful differences in everyday life, by improving health, wellness, comfort and energy efficiency.” Our people are the foundation for making our mission come to life every day.

Our human capital focus is to inspire people to achieve their aspirations and achieve strong business results. We also strive to promote a safe work environment and a culture that values fairness, diversity, equity, inclusion and belonging.

Our global workforce creates a competitive advantage and operates in 14 countries in over 32 locations. As of December 31, 2022, and 2021, Gentherm’s employment levels worldwide were as follows:

	2022 ^(a)	2021
Mexico	5,047	3,293
Macedonia	2,503	1,845
China	2,070	1,456
Ukraine	1,761	1,906
Vietnam	986	858
Germany	739	264
United States and Canada	676	488
Hungary	352	285
Czech Republic	351	—
Korea	49	45
Japan	20	21
Malta	10	9
United Kingdom	4	4
Total	14,568	10,474

(a) Approximately 2,000 employees were added to Gentherm in 2022 as a result of the Alfmeier and Dacheng acquisitions.

Notable statistics as of December 31, 2022:

- 39% of our workforce resides in North America; 39% of our workforce resides in Europe; and 22% of our workforce resides in Asia.

- We have cooperative relationships in our facilities where we operate with unions and workers councils. Approximately 31% of the Company's workforce are members of industrial trade unions or works councils and are employed under the terms of various labor agreements.
- Two of eight Board members are female. Four of ten executive committee members are female and two are diverse.
- Over 56% of our global workforce is female.
- We experienced a 3.3% growth of diversity representation (global females and minorities in the U.S.) for our global Director and VP population of Legacy Gentherm
- Within the United States, over 36% of our employees self-disclose as racially or ethnically diverse.

Racially and Ethnically Diverse (Self-reported)	2022	2021
All Employees	36 %	36 %
Leadership	23 %	23 %

Key Highlights of our Human Capital Strategy

In November 2021, we completed our first global engagement survey with a best-in-class response rate of 97%. In 2022, we developed action plans at every location to ensure we are creating a culture of feedback and continual improvement. We plan to complete another benchmark survey in 2023, including employees from our Alfmeier and Dacheng acquisitions.

Health and Safety

At Gentherm, our "Safety Culture" has become a core strength. Our Vision Zero strategy helped us achieve significant progress in reducing accidents across our sites. We had fewer than 20 lost time accidents in 2022.

Diversity, Equity and Inclusion (DE+I)

Our DE+I mission "Embracing Diversity Inspires Innovation" cascades from our corporate mission. Our Diversity, Equity and Inclusion Council has built strong momentum. In 2022, we set a robust goal for talent acquisition. Such focus helped us increase diversity candidate slates, and through this effort we increased Director and VP population of Gentherm (excluding acquisitions of Alfmeier and Dacheng) representation by over 3%. We took another step forward on our DE+I journey with scaling our inclusion trainings to all global salaried-professional employees with the purpose of building local and global awareness of DE+I at Gentherm. We also held several sessions to educate our employees on unconscious bias. Our goal is ensuring all team members are educated on consistent standards, identifying feedback mechanisms to solve for conflict, and creating a culture that unites us all.

Total Rewards

Gentherm's compensation and benefits programs are designed to attract and retain our employees in the locations where we compete for talent using a mix of elements that allow us to achieve our Company's short and long-term goals.

- We provide employee wages that are competitive and consistent with employee positions, skill levels, experience, knowledge and geographic location.
- We align our executives' and eligible employees' annual bonus opportunity and long-term equity compensation with our shareholders' interests by linking realizable pay with company financial and stock performance.
- We have refreshed our overall compensation structure to ensure we are providing contemporary and equitable total rewards across our business.
- We completed a global pay equity study as part of our efforts to ensure fairness with respect to employee pay. The study found minimal pay gaps between groups of employees.

Total Talent Development

At Gentherm, we provide foundational leadership development programs to ensure our current and future people leaders are well equipped to engage and lead in today's complex business environment. We have offered additional training programs to provide

on-demand, flexible learning solutions for our global workforce. We continue to invest in our Accelerator program for high potential employee development to retain our future leaders. In 2022, our workforce completed over 500,000 hours of training.

Environmental, Social, and Governance

In 2022, we issued our third sustainability report and continued to incorporate ESG into our everyday business operations and future strategies. Our sustainability efforts are based on three pillars: People, Planet, and Places.

- **People:** At Gentherm, our leaders treat employees with respect and provide a safe working environment. We provide career opportunities, development, support and more. People create our success.
- **Planet:** We strive to minimize our environmental impact. We believe our product lineup reduces the environmental impact of automobiles through our innovative products and technologies, and we continue to improve our operations through more efficient use of resources and reduced emissions. As part of this pillar, we also focus on our products – what materials go into them, what are the impacts of our products, both upstream and downstream, and even how our products are dealt with at the end of their useful life.
- **Places:** As a global company, we strive to be a positive force in the communities where we do business. Our teams support an array of causes, including STEM education and training, financial support for local charities and providing volunteer time to support efforts to improve the local communities. Types of community involvement and support vary across our sites, based on local needs, requirements, and culture.

These actions indicate the strength of our commitment to sustainability across Gentherm.

Environmental and Regulatory Compliance

Applicable laws and regulations, and significant changes to such laws and regulations, will potentially lead to increases in costs and complexity, and failure to comply with global and specific country regulations could subject us to civil penalties, production disruptions, or limitations on the sale of affected products. We believe we are materially in compliance with substantially all these requirements or expect to be materially in compliance by the required dates.

Chemical Regulation

There are numerous global laws and regulations that prohibit or restrict the selection and use of certain chemicals for product development and manufacturing and potentially impact an automobile manufacturer's responsibility for vehicle components at the end of a vehicle's life. New chemical regulations continue to be introduced and passed, such as the new European requirements that require suppliers of parts and vehicles to the European market to disclose certain substances of concern in parts. Further, increases in the use of circuit boards and other electronics may require additional assessment under the directives related to certain hazardous substances and waste from electrical and electronic equipment.

Vehicle Safety

In the U.S., the National Traffic and Motor Vehicle Safety Act of 1966 (the "Safety Act") regulates motor vehicle equipment that we manufacture and sell as well as vehicles. The Safety Act prohibits the sale in the United States of any new vehicle or equipment that does not conform to applicable federal motor vehicle safety standards established by the National Highway Traffic Safety Administration ("NHTSA"). The Safety Act further requires that if a vehicle manufacturer or NHTSA determine a vehicle or an item of vehicle equipment does not comply with a safety standard, or that vehicle or equipment contains a defect that poses an unreasonable safety risk, the vehicle manufacturer must conduct a safety recall to remedy that condition in the affected vehicles. Should a vehicle manufacturer or NHTSA determine a safety defect or noncompliance issue exists with respect to any of our products, the cost of such recall campaigns could be substantial. Further, many other countries have established vehicle and vehicle equipment safety standards and regulations. Meeting or exceeding the many safety standards is costly as global compliance and non-governmental assessment requirements continue to evolve and grow more complex, and lack harmonization globally.

ITEM 1A. RISK FACTORS

You should carefully consider each of the risks, assumptions, uncertainties and other factors described below and elsewhere in this Annual Report, as well as any amendments or updates reflected in subsequent filings or furnishings with the SEC. We believe these risks, assumptions, uncertainties and other factors, individually or in the aggregate, could cause our actual results to differ materially from expected and historical results and could materially and adversely affect our business operations, results of operations, financial condition and liquidity.

Industry and Operational Risks

The automotive industry, our primary market, is cyclical and is significantly impacted by macroeconomic, geopolitical and similar global factors, and a decline in the production levels of our major customers and OEMs, particularly with respect to models for which we supply significant amounts of product, could adversely affect our business, results of operations and financial condition.

Our Automotive segment represents 96%, 96% and 95% of our product revenues for the years ended December 31, 2022, 2021 and 2020, respectively. Demand for our automotive products is directly related to automotive vehicle production, which is ultimately dependent on consumer demand for automotive vehicles, our content per vehicle, and other factors that may limit or otherwise impact production by us, our supply chain and our customers. Automotive sales and production are cyclical and are materially affected by macroeconomic, geopolitical and industry conditions that are outside of our control and the control of our customers and suppliers, including monetary fiscal policy, economic recessions, inflation, political instability, labor relations issues, energy prices, regulatory requirements, government initiatives, trade restrictions and agreements, capital and liquidity constraints, acts of war and terrorism, and natural and man-made disasters. Our operational costs are similarly impacted by such macroeconomic, geopolitical and industry conditions, which has and may continue to adversely impact our margins and profitability.

In recent years, macroeconomic, geopolitical and industry conditions were significantly impacted by the COVID-19 pandemic and related government actions and restrictions, as well as health and safety measures implemented by companies and persons; any future impacts from such pandemic are highly uncertain and cannot be predicted. To the extent the COVID-19 pandemic materially adversely affects the Company's business and financial results, it may also have the effect of significantly heightening many of the other risks associated with the Company's business, results of operations, financial condition, cash flows, liquidity and stock price, including in ways that we cannot predict.

If we fail to manage our growth effectively or to integrate successfully any new or future business ventures, acquisitions, investments or strategic alliance into our business, including our recent acquisitions, our business and financial performance could be materially adversely harmed.

We regularly consider opportunities to pursue business ventures, acquisitions, investments and strategic alliances that could leverage our products, technologies and capabilities, as well as, enhance our customer base, geographic penetration and scale, to complement our current businesses, some of which could be material. We completed two acquisitions in 2022, Alfmeier and Dacheng, and we have completed other acquisitions and investments in recent years. Finding and assessing a potential growth opportunity and completing a transaction involves extensive due diligence, management time and expense; however, the amount of information we can obtain about a potential growth opportunity may be limited, and we may not be able to identify suitable candidates, negotiate appropriate terms, obtain financing on acceptable terms, complete proposed acquisitions, or expand into new geographies or markets. Further, we can give no assurance that new business ventures, acquisitions, investments and strategic alliances will positively affect our financial performance or will perform as planned, including regarding anticipated synergies or other financial or operational benefits. For significant transactions, we would expect to incur additional debt, issue equity and/or increase capital expenditures, which may increase leverage risks, result in dilution or reduce capital available for other investments in ongoing operations. If we fail to identify and complete suitable acquisition and investment opportunities in a timely and successful manner, our business, growth strategy reputation and results of operations could be materially impacted.

Furthermore, the success of our acquisitions is dependent, in part, on our ability to realize the expected benefits from the integration of the acquired businesses or assets. We may incur an unexpected amount of liabilities or make incorrect estimates regarding the planned accounting for acquisitions, such as the need to record non-recurring charges or write-off of significant amounts of goodwill or other assets that could adversely affect our results of operations, and we could have unexpected challenges due to the limitations of our due diligence process or contractual provisions. Further, the integration of acquired businesses is a complex, costly and time-consuming process that requires significant management attention and resources. It is possible that the integration process

could result in the loss of key employees, the disruption of our operations, the inability to maintain or increase its competitive presence, inconsistencies in and incompatibility of information technology and accounting systems, as well as other compliance standards, controls, procedures and policies, difficulties in achieving anticipated cost savings, synergies, business opportunities and growth prospects from the acquisition, additional litigation, compliance or regulatory risk, the diversion of management's attention to integration matters and difficulties in the assimilation of employees and corporate cultures, especially if the acquisition involves a business, supply chain or operations in one or more countries in which we have a limited history and lack of experience. Any or all of these factors and our increased debt leverage following the closing of any significant transaction, such as the acquisition of Alfmeier, could have an adverse effect on our business and financial performance. In addition, many of these factors are outside of our control, and any one of these factors could result in increased costs, decreases in the amount of expected revenues and additional diversion of management's time and energy, which could materially adversely impact our business, financial condition and results of operations. Likewise, our failure to integrate and manage acquired companies successfully may lead to reduced profitability and future impairment of any associated goodwill and intangible asset balances.

Our inability to effectively manage the development, timing, quality and costs of new product launches could adversely affect our financial performance.

Gentherm develops and launches new products and related technologies through internal research and development, and from acquisitions and investments in joint ventures. Further, winning new business awards will include specific customer requirements regarding, among other things, timing, performance and quality standards. The launch of new products and technologies is complex, the success of which depends on a wide range of factors, including the robustness of our product and manufacturing process development, success in sourcing new components and commodities with suitable suppliers, readiness of our and our suppliers' manufacturing facilities and manufacturing processes, as well as factors related to tooling, equipment, employees, initial product quality and other factors. New launches have become even more complicated given the increased use of advanced electronics that must be integrated throughout a vehicle. Given the complexity of new product and technology launches, we may experience difficulties managing product quality, timeliness and associated costs.

In addition, new program launches require a significant ramp up of costs up to a few years prior to sales of such products. However, our sales related to these new programs generally are dependent upon the timing and success of our customers' introduction of new vehicles. Our inability to effectively manage the timing, quality and costs of these new program launches could have a materially adverse effect on our business, results of operations and financial condition.

To the extent we are not able to successfully launch new business, vehicle production at our customers could be significantly delayed or shut down. Such operating failures could result in significant financial penalties to us or a diversion of personnel and financial resources to improving launches rather than investment in continuous process improvement or other growth initiatives, and could result in our customers shifting work away from us to a competitor. Any of the foregoing matters could result in a significant loss of revenue and market share and could have an adverse effect on our profitability and cash flows.

We operate in a highly competitive industry and efforts by our competitors, as well as new non-traditional entrants to the industry could adversely affect our business, results of operations and financial condition.

The automotive component supply industry is subject to intense competition. Business is typically awarded to the supplier offering the most favorable combination of cost, quality, timely delivery, technological innovation and service. There can be no assurance that we will be able to compete successfully with the products of our competitors. Further, our competitors' efforts to grow market share could exert downward pressure on our product pricing and margins. Many of our competitors are substantially larger in size and have substantially greater financial, marketing and other resources than we do, and therefore may be more effective in adapting to customer requirements while being more profitable. In addition, our customers may increase levels of production insourcing and compete directly with us for a variety of reasons, such as shifts in business strategies or the emergence of low-cost production opportunities in other countries, which may adversely affect our sales as well as the profit margins on our products.

The global automotive supply chain has been adversely impacted by raw material and component shortages, manufacturing disruptions and delays, logistics challenges and inflationary and other cost pressures, and we expect such conditions to continue to adversely affect our business, profitability and results of operations.

Our products contain a significant number of components that we source globally from suppliers who, in turn, source components from their global suppliers. If our supply chain fails to deliver products to us in sufficient quality and quantity on a timely

basis, we will be challenged to meet our production schedules and fulfill our orders due to the “just-in-time” manufacturing process that is broadly utilized in our industry, which would decrease sales and profits and could damage our commercial reputation and customer relationships. Similarly, OEMs and Tier 1s to whom we supply our products are dependent on an ever-greater number of global suppliers to manufacture and sell their products to consumers, which drives sales of our products.

We and our customers, and our respective supply chains, have operated in a supply-constrained environment for over one year and are continuing to manage through raw material and component shortages, manufacturing disruptions and delays, logistics challenges and inflationary and other operational challenges and costs pressures, each of which is described in the risk factors below and has adversely affected, and is expected to continue to adversely effect, our business, profitability and results of operations. We have taken certain mitigation efforts to address such matters, which has led to increased operating costs and carrying costs due to the build-up of inventory.

Raw material and component shortages and pricing impacts have adversely impacted our business and financial performance and we expect these conditions to continue.

The availability of raw materials and product components fluctuates due to factors outside of our control, including supply and demand imbalances, geopolitical and macroeconomic factors, trade laws and tariffs, natural disasters, and global pandemics such as COVID-19, which has and we expect will continue to impact the ability of our supply chain to meet our production requirements and therefore our ability to meet the production demands of our customers. Even a single small subcomponent necessary to manufacture our product could force us to cease production, potentially for a prolonged period.

In particular, since 2021, the automotive industry is continuing to navigate through a significant shortage of semiconductors, a critical component in the automotive industry. We, the OEMs and Tier 1s must compete among the automotive supply chain and with other industries to satisfy current and near-term requirements for semiconductors, and such allocation is not within our control even though we have continued to attempt various mitigating actions. Certain semiconductors we utilize are sourced from a very limited number of suppliers and many suppliers are based in Taiwan (and therefore such supply may be impacted by China-Taiwan geopolitical matters), which further exacerbates the risks to our operations. The shortage of semiconductors and other key components (historically, such as TEDs), has disrupted our production schedule and has caused us to procure components on the open market, from time to time, at prices significantly above the contractual pricing we have with our current long-term suppliers. OEM and Tier 1 production also has been impacted by the shortage, which has resulted in reduced sales of our products. While the global semiconductor supply shortage is easing, it has had, and is continuing to have, wide-ranging effects.

Furthermore, sudden changes in the production schedules of OEMs and Tier 1s caused by raw material and component shortages also have resulted and may continue to result in operating inefficiencies, which could adversely affect our profitability and results of operations. If we were to fail to make timely deliveries in accordance with contractual obligations, we generally must absorb our own costs for identifying and solving the problem as well as expeditiously producing replacement components or products. Generally, we must also carry the costs associated with catching up, such as overtime and premium freight. Additionally, if we are the primary cause for a customer being forced to halt production, the customer may seek to recoup all of its losses and expenses from the Company. The raw material and component shortages have had and may continue to have a material adverse effect on our business, profitability and results of operations.

We also have experienced and we may continue to experience margin pressure due to the pricing of components and certain other raw materials. Some of our products contain certain components, such as semiconductor chips, tellurium, a raw material used in TEDs, and other key raw materials including copper, silver and petroleum-based engineered plastics and raw materials, which generally cannot be substituted. The prices for these components and raw materials fluctuate depending on market conditions. The automotive industry has seen a period of sustained price increases for commodities, primarily related to steel, and to a lesser extent petrochemicals. If the market prices and related logistics costs (in particular for imported goods) for these components and raw materials remain higher than normal or they further increase, our gross profit may continue to be adversely impacted, including to the extent our suppliers pass cost increases on to us that we cannot pass on in full to our customers in spite of our mitigation efforts.

Inflationary pressures impacting our suppliers, customers, transportation companies and other third parties have increased our costs to manufacture and deliver our products, and therefore adversely impacted our margins and profitability.

The automotive industry has experienced a period of sustained price increases for various material components and transportation and other logistics services. These price increases are expected to continue into the foreseeable future due to continuing challenges with supply-demand imbalances. Although the Company has developed and implemented strategies to mitigate the impact

of higher material component costs and transportation and other logistics costs, these strategies, together with commercial negotiations with Gentherm's customers and suppliers, have not historically and may not in the future fully offset our price increases, which may result in adverse impacts to the Company's profitability and results of operations. A highly inflationary environment also can have a negative impact on customers' willingness to purchase our products. We generally have been unable to raise prices to address in full the foregoing inflationary pricing pressures, together with price downs for our products that are customary in our industry, and therefore our margins and profitability have been and may continue to be adversely impacted.

The supply-constrained environment has led to a significant increase in inventory, which has had an adverse impact on profitability and could lead to future impairment.

In order to secure components for our products, we have and may continue to strategically purchase components in advance of demand to take advantage of favorable pricing or to address concerns about future availability. If we fail to anticipate customer demand properly, a temporary oversupply could result in excess or obsolete components, which could adversely affect our business and financial performance, including due to impairment of such assets.

Our global operations subject us to risks that may harm our operations and financial results.

In 2022, 61% of our product revenue was generated from sales to customers outside the United States. We have significant personnel, property, equipment and operations in a number of countries outside of the United States, including China, Germany, Hungary, North Macedonia, Mexico, South Korea, Czech Republic, Ukraine and Vietnam. Our exposure to the risks described below is substantial. We also derive a significant portion of revenues from Europe and Asia and conduct certain investing and financing activities in local currencies.

In addition to the general risks relating to our operations, our international operations are subject to unique risks inherent in doing business abroad, including:

- exposure to local economic, political, social and labor practices and conditions;
- different and complex local laws and regulations and enforcement thereof;
- compliance with the requirements of an increasing body of applicable anti-bribery and anti-corruption laws, including compliance by any acquired companies;
- increases in duties, tariffs and taxation on our products related to U.S. trade disputes, trade restrictions and potential trade wars;
- exposure to infectious disease and epidemics, including the effects on our business operations, and those of our customers and suppliers, in geographic locations impacted by an outbreak;
- violence and civil unrest (including acts of terrorism, drug-cartel related and other forms of violence and outbreaks of war);
- expropriation, nationalization or other protectionist activities;
- currency exchange rate fluctuations and currency controls;
- local business and cultural factors that differ from our customary standards and practices;
- withholding and other taxes on repatriated funds and other payments by subsidiaries;
- other cultural and linguistic differences;
- difficulties in managing or overseeing foreign operations and agents;
- potentially longer payment cycles;
- different credit risks; and
- difficulty of enforcing agreements, collecting receivables and protecting intellectual property and other assets through non-U.S. legal systems.

Additionally, our primary manufacturing locations are in Mexico, China, Vietnam, North Macedonia, Czech Republic and Ukraine, all countries that have historically experienced a heightened degree of political, civil and labor uncertainty. In China, continued U.S.-China trade tensions and weakening economic conditions, among other factors, may result in reduced sales, profitability and margins, increased operating costs and challenges to gaining or holding market share. Furthermore, certain risks and uncertainties of doing business in China are solely within the control of the Chinese government, including Chinese regulation of the scope of our business and investments in China, as well as our ability to provide cash to and repatriate cash from our business entities in China. In order to maintain access to the Chinese market, we may be required to comply with significant technical and other regulatory requirements that are unique to the Chinese market, at times with challenging lead times. These actions may increase the cost of doing business in China or limit how and under what conditions we may do business in China, which could materially and adversely affect our profitability and financial condition.

Our operations within Ukraine subject us to risks that may harm our operations and financial results.

The United States and global markets are experiencing volatility and disruption due to the escalation of geopolitical tensions and the military conflict between Russia and Ukraine. The conflict and certain measures taken in response have impacted the availability and prices of certain raw materials and energy (especially in Europe), and could have a lasting impact on regional and global economies. For example in response to Russia's invasion in Ukraine, a number of countries, including the United States, the United Kingdom and members of the European Union, have implemented economic sanctions on Russia, Belarus and nearby regions, as well as numerous Russian individuals and enterprises including several large banks and state-owned entities.

Our facility in Vynohradiv is on the far western corner within the Transcarpathia region of Ukraine near the Hungary border. In 2022, products manufactured at our Ukraine facility represented approximately 8% of the Company's total revenue, including automotive cables, seat heaters and steering wheel heaters, compared to 11% in 2021. At this time, our Ukraine facility is operating at normal levels and we continue to execute contingency plans and, in coordination with certain customers, specific equipment and production relocations leveraging our flexible global manufacturing footprint. Certain of our employees in Ukraine are routinely conscripted into the military and/or sent to the Russian border to fight in the ongoing conflict. We have incurred, and will likely continue to incur costs to support our employees and relocate equipment and production based on customer and company needs. We have also experienced and may continue to experience interruptions in power supply at our Ukraine facility. We have contingency measures in place to address intermittent power supply interruptions, however, extended interruptions could significantly impact our ability to operate the facility. Further, most of our products manufactured in Ukraine are shipped across the border from Ukraine to Hungary for further delivery to our customers. If that border crossing were to be closed or restricted for any reason, we may experience a significant disruption to our operations. Our response to the ongoing conflict is based on a severity level contingency response plan that has been developed with certain customers. As the situation in Ukraine is very fluid, we continue to monitor its effects on our business and we continue to work closely with our customers to adjust our contingency response as necessary.

Although the length and impact of the ongoing military conflict is highly unpredictable, the conflict in Ukraine has led to and could lead to further market disruptions, including significant volatility in the prices and availability of certain commodities and energy, volatility in credit and capital markets, interruptions in our supply chain, increased costs and reduced availability of labor, materials and components, result in impairment of tangible assets and implementation of restructuring activities, and may impair our ability to complete financial or banking transactions. Any of the foregoing factors could have a material adverse effect on our business, financial results and stock price.

Labor shortages, work stoppages and additional workforce disruptions impacting us, our suppliers or customers periodically have disrupted our operations and our growth strategies, and resulting increases in labor and related operating costs may adversely impact our financial performance.

Labor shortages, work stoppages and additional workforce disruptions due to illness, quarantines and absenteeism, including ours and those at our suppliers or customers, periodically have disrupted our business and adversely impacted our financial performance. Because the automotive industry relies heavily on "just-in-time" delivery of components, labor shortages or work stoppages at one or more of Gentherm's production facilities or those of our suppliers could have adverse effects on the business and financial results, including if the OEMs elect to manufacture and sell cars without our products if we are unable to deliver our products on a timely basis or at all. Similarly, if one or more of our direct customers or an OEM were to experience labor shortages or work stoppages, such as what occurred during the General Motors labor strike occurring in the Fall of 2019 or the prolonged work stoppages that occurred in the first half of 2020 as a result of the COVID-19 pandemic, they likely would halt or limit purchases of our products, which could result in the temporary shutdown of the related Gentherm production facilities or other restructuring initiatives.

Approximately 31% of the Company's workforce are members of industrial trade unions and we believe a significant percentage of employees of our largest customers and suppliers are members of industrial trade unions, all of whom are employed under the terms of various labor agreements. A union strike or inability to enter into a new labor agreement prior to expiration of an existing agreement could have an adverse impact on us or our suppliers or customers. In addition, competition for skilled workers due to labor shortages has increased labor costs and created employee retention and recruitment challenges, which has adversely impacted our profitability and operations and ability to execute on certain strategic initiatives.

Our inability to achieve product cost reductions which offset customer-imposed price reductions could adversely affect our financial performance.

Downward pricing pressure is customarily applied by automotive manufacturers to the automotive supply chain. Our customer contracts generally provide for annual price reductions over the production life of the vehicle, while requiring us to assume significant responsibility for the design, development and engineering of our products, as well as the costs incurred through our supply chain. Prices may also be adjusted on an ongoing basis to reflect changes in product content/costs and other commercial factors. Our inability to achieve product cost reductions that offset customer-imposed price reductions could adversely affect our financial condition, results of operations and cash flows.

Security breaches and other disruptions to our information technology networks and systems, including a disruption related to cybersecurity, could interfere with our operations and could compromise the confidentiality of our proprietary information or personal information.

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. We rely upon the capacity, reliability and security of our IT and data security infrastructure, as well as our ability to expand and continually update this infrastructure in response to the changing needs of our business. If we experience a problem with the functioning of an important IT system or a security breach of our IT systems, due to failure to timely upgrade systems or during system upgrades and/or new system implementations, or resulting from failures of our third-party service providers, the resulting disruptions could have an adverse effect on our business.

As with most companies, we have experienced cyber-attacks, attempts to breach our systems and other similar incidents, none of which were material in 2022. Any future cyber incidents could, however, 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; delay our ability to deliver products to customers; and jeopardize the security of our facilities. A cyber incident could be caused by malicious outsiders (including state-sponsored espionage or cyberwarfare) or insiders using sophisticated methods to circumvent firewalls, encryption and other security defenses. 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, "ransomware" and other cyber-attacks, are increasing in both frequency and sophistication. Many victims of ransomware are forced to pay significant ransoms to regain access to their critical business data, and we may not be permitted under various regulations and laws to make such payments. With more of our employees working part-time remotely and in periods of significant acquisition integration activity such as we are currently undertaking, there may be increased opportunities for unauthorized access and cyber-attacks. Further, the United States government has warned of the potential risk of Russian cyberattacks stemming from the ongoing Russian-Ukraine conflict. We continuously seek to maintain a robust program of information security and controls, but the impact of a material information technology event could subject us to legal or regulatory sanctions and have a material adverse effect on our competitive position, reputation, results of operations, financial condition and cash flows.

Despite our implementation of security measures, our IT systems, like those of other companies, are vulnerable to damages from computer viruses, natural disasters (which may become more frequent due to climate change), unauthorized access, cyber-attack and other similar disruptions. Any system failure, accident or security breach could result in disruptions to our operations and include the theft of our intellectual property, trade secrets, customer information, human resources information or other confidential information. The foregoing matters could cause significant damage to our reputation, affect our relationships with its customers, lead to claims against us, fines and other penalties assessed upon us by governmental authorities, and ultimately harm our business and financial performance. In addition, we may be required to incur significant costs to remediate and protect against damage caused by these disruptions or security breaches in the future.

There is ongoing significant competition to address the evolution of the automotive industry towards electric vehicles, autonomous vehicles and mobility on demand services, and our failure to adapt our strategies and operations successfully could have a material adverse effect on our business, results of operations and financial condition.

The global automotive industry is experiencing a period of significant technological change, and we are making significant investments to develop and acquire technologies and products that will enhance our competitiveness. Future automotive vehicle production is expected to be affected significantly by additional industry or consumer behaviors, including the development and use of autonomous and electric vehicles and increasing use of car and ridesharing and on-demand transportation as a service, as well as related regulations. Our future success is dependent on our ability to execute our long-term strategies addressing the evolution of the automotive industry and customer utilization of personal transportation. The rapidly evolving nature of the markets in which we compete has attracted, and may continue to attract, new entrants, including new entrants from outside the traditional automotive supply industry. Further, in comparison to us, our competitors may foresee the course of market developments more accurately, develop superior products and technologies, produce similar products at a lower cost, or adapt quicker to new industry technologies. If we do not accurately predict, prepare for and respond to new kinds of technological innovations, market developments and changing customer needs, our long-term competitiveness could be harmed significantly and our business, results of operations and financial condition could be materially and adversely impacted.

Our ability to market our products successfully depends on acceptance of our products by existing and potential customers and consumers, as well as the success of our customers.

We have been, and will continue to be, required to educate potential customers and demonstrate that the merits of our existing products justify the costs associated with them. Similar and enhanced efforts will be required with existing and potential customers for additional products and technologies we develop, acquire or license. Customers will only include our products if there appears to be consumer demand. For our automotive products, we rely on OEMs and applicable dealer networks to market our products to consumers, and we do not have any control over the marketing budget or messaging nor the training of employees and agents regarding our products. Further, OEMs and dealer networks may market products offered by our competitors, including products manufactured by such OEMs. If customers or consumers conclude that our automotive products are unnecessary or too expensive or that our competitors offer more favorable sales terms or better products, OEMs and other customers may reduce availability or decline to include our products in their vehicles.

Our ongoing efforts to optimize our global supply chain could cause supply disruptions and be more costly, time-consuming and resource-intensive than expected.

Our ongoing efforts to optimize the efficiency of our global supply chain could cause supply disruptions and could be more expensive, time-consuming and resource-intensive than expected. Furthermore, certain of our suppliers may decide to discontinue business with us or limit the allocation of products to us or we may become too dependent on one or more suppliers, which could result in our inability to fill our supply needs and jeopardize our ability to fulfill our contractual obligations, which could in turn, result in a decrease in revenues and profitability, contract penalties or terminations, and damage to customer relationships.

We manage our business based on projected future sales volume, which is highly dependent on information received from customers and general market data, and any inaccuracies or changes in such information could adversely affect our business, results of operations and financial condition.

We manage our business based upon projected future sales volumes, which are based upon many factors, including awarded business and assumptions of conversion rates thereof, customers' forecasts and general macroeconomic and industry market data. Our product revenues generally are based upon purchase orders issued by our customers, with updated production schedules for volume adjustments, and our customers generally do not guarantee sales volumes. As such, we typically do not have a backlog of firm orders at any point in time. In addition, awarded business may include business under arrangements that our customers have the right to terminate without penalty at any time. Further, our customers' forecasts are subject to numerous assumptions, and such forecasts often are changed rapidly with limited notice. Therefore, our actual sales volumes, and thus the ultimate amount of revenue that we derive from such sales, are not committed. We also must incur costs and make commitments well in advance of the receipt of orders and resulting revenues from customers. If actual production orders from our customers are not consistent with our projected future sales volumes, especially for our higher-margin products, we could realize substantially less revenue and incur greater expenses over the life of vehicle programs.

The receipt of orders and resulting revenues from customers is significantly affected by global automotive production levels. Recent macroeconomic, geopolitical and industry factors noted above have made it particularly challenging for us to project future sales volumes and manage our business.

The material reduction in sales from any of our principal customers, due to acquisition activity, insolvency or otherwise, could materially and adversely affect our business, results of operations, cash flows and financial condition.

For the year ended December 31, 2022, our top two customers were Lear and Adient, which comprised 16% and 15%, respectively, of our product revenues. Combined, approximately 70% of product revenues to these customers was sourced directly by the OEMs. Our products supplied to General Motors and Hyundai represented 15% and 11% of our total product revenues for the year ended December 31, 2022. The continued growth, viability and financial stability of our principal customers, as well as the OEMs to which our products are supplied, are critical to our success. The loss of any significant portion of our sales from either of these customers or other significant customers, whether due to acquisition activity, insolvency or otherwise, would have a material adverse effect on our business, results of operations, cash flows and financial condition. We sometimes experience, and we expect to continue to experience, a delay in our collection of accounts receivable balances from our customers, which may be significant and could be at risk in the event of their bankruptcy or other restructuring.

In addition, if any of our significant customers successfully insources products that we currently manufacture, whether by the acquisition of one of our competitors or otherwise, the discontinuation or loss of business as a result would have an adverse impact on our business and financial performance. For example, Lear recently has acquired certain companies that have competed with us historically and has announced its intent to insource more products and technologies in the future, and Lear may compete with us directly in the future. The impact of Lear's acquisitions on our business with Lear, as well as with OEMs and other Tier 1s, is unknown and could adversely impact our financial condition, results of operations and cash flows.

Our business is subject to risks associated with manufacturing processes.

If certain of our existing production facilities become incapable of manufacturing products or production capacity is limited for any reason, such as terror attacks, war, or other civil disturbances, natural disasters (which may be more frequent due to climate change), other catastrophic events, public health crises, labor shortages, work stoppages, or other events that cause facility closures or production disruptions, we may be unable to meet production requirements, sales and profits could decline, and our commercial reputation could be damaged. For example, we experienced extended work stoppages in the first half of 2020 as the pandemic spread and governmental authorities initiated "lock-down" orders for all non-essential activities. Without operation of certain existing production facilities, we may be limited in our ability to deliver products until we restore the manufacturing capability at the particular facility, find an alternative manufacturing facility or arrange an alternative source of supply.

We maintain property damage insurance that we believe to be adequate to provide for reconstruction of facilities and equipment, as well as business interruption insurance to mitigate losses resulting from any production interruption or shutdown caused by an insured loss. However, any recovery under our insurance policies may not offset the lost sales, harm to our business reputation or increased costs that may be experienced during the disruption of operations. Further, any such proceeds may be received and accounted for in a different reporting period, which could materially and adversely affect our business, financial condition, results of operations and cash flow generally or for a specific reporting period.

We use important intellectual property in our business. If we are unable to protect our intellectual property or if a third party makes assertions against us or our customers relating to intellectual property rights, our business could be adversely affected.

We own important intellectual property, including patents, trademarks, copyrights and trade secrets. Our intellectual property plays an important role in maintaining our competitive position in many of the markets that we serve.

We cannot guarantee, however, that we will be able to secure all desired protection, nor that the steps we have taken to protect our intellectual property will be adequate, to prevent infringement of our rights or misappropriation or theft of our technology, trade secrets or know-how. For example, effective patent, trademark, copyright and trade secret protection may be unavailable or limited in some of the countries in which we operate. In addition, while we generally enter into confidentiality agreements with our employees and third parties to protect our trade secrets, know-how, business strategy and other proprietary information, such confidentiality agreements could be breached or otherwise may not provide meaningful protection for our trade secrets and know-how related to the design, manufacture or operation of our products. If it became necessary for us to resort to litigation to protect our intellectual property rights, any proceedings could be burdensome and costly, and we may not prevail. Further, adequate remedies may not be available in

the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Finally, for those products in our portfolio that rely on patent protection, once a patent has expired, the product is generally open to competition. Products under patent protection usually generate higher revenues and profitability than those not protected by patents. If we fail to successfully enforce our intellectual property rights, our competitive position could suffer, which could harm our business, financial condition, results of operations and cash flows.

In addition, our competitors may develop technologies that are similar or superior to our proprietary technologies or design around the patents we own or license. Further, as we expand our operations in jurisdictions where the protection of intellectual property rights is less robust, the risk of others duplicating our proprietary technologies increases, despite efforts we undertake to protect them. Foreign governments may adopt regulations, and foreign governments or courts may render decisions, requiring compulsory licensing of intellectual property rights, or foreign governments may require products to meet standards that serve to favor local companies or provide reduced protection relative to other countries.

Our Board approved the Company's plan to exit its non-automotive electronics business, including a potential sale or wind-down of the business, and will incur significant non-cash expenses.

In December 2022, our Board approve the Company's plan to exit its non-automotive electronics business to strengthen the Company's core business and focus its resources and equipment with businesses and investments that are more strategic and profitable. The Company will continue to sell certain business products until the exit is complete. For the twelve months ended December 31, 2022, the Company's product revenues from the business were \$17.1 million. In connection with approval of the plan to exit the non-automotive electronics business, the Company recorded non-cash impairment charges of \$9.4 million, \$5.6 million and \$0.7 million for write-downs of inventory, intangible assets, and property and equipment, respectively. The Company is expected to incur total non-cash expenses of between \$13 million and \$18 million. The Company may be unable sell the business or substantially all of its assets on a timely basis, for a reasonable purchase price or at all, any wind-down of the business may not occur on a timely basis or require more of the Company's resources than anticipated, the Company's incurred expense related to the exit from or wind-down of the business may exceed the Company's projections and there may be additional expense and costs in future periods.

Legal, Regulatory and Compliance Risks

Economic and trade policy, including tariffs and customs regulations, could have a material and adverse effect on our business.

The U.S. has established free trade laws and regulations that set certain duties and tariffs for qualifying imports and exports, subject to compliance with the applicable classification and other requirements. Changes in laws or policies governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where we manufacture products, such as China and Mexico, could have a material adverse effect on our business and financial results. In recent years, the U.S. and Chinese governments have imposed a series of significant incremental retaliatory tariffs to certain imported products. Most notably with respect to the automotive industry, the U.S. imposed tariffs on imports of certain steel, aluminum and automotive components, and China imposed retaliatory tariffs on imports of U.S. vehicles and certain automotive components. Depending upon their duration and implementation, as well as our ability to mitigate their impact, these tariffs and any other future regulatory actions implemented on a broader range of products or raw materials could materially affect our business, including in the form of increased cost of goods sold, decreased margins, increased pricing for customers, reduced sales and disruption in our supply chain.

In addition, various countries regulate cross-border transactions of certain products through import permitting and licensing requirements. The exportation, re-exportation, transfers within foreign countries and importation of our products, including by our suppliers and vendors, must comply with these laws and regulations, and any violations may result in reputational harm, government investigations and penalties, and a denial or curtailment of importing or exporting activities. Complying with export control and sanctions laws may be time consuming, may increase our costs, and may result in the delay or loss of sales opportunities. If we are found to be in violation of U.S. sanctions or export control laws, or similar laws in other jurisdictions, we and the individuals working for us could incur substantial fines and penalties. Changes in export, sanctions or import laws or regulations may delay the introduction and sale of our products in the U.S. and international markets, require us to spend resources to seek necessary government authorizations or to develop different versions of our products, or, in some cases, prevent the export or import of our products to certain countries, regions, governments, persons or entities, which could adversely affect our business, financial condition and operating results.

We may face particular privacy, data security and data protection risks.

We are subject to several data privacy and data security laws and regulations in the various jurisdictions that we operate. An increasing number of U.S. states have enacted data privacy and security laws and regulations that govern the collection, use, disclosure, transfer, storage, disposal, and protection of personal information, such as social security numbers, financial information and other information. For example, several U.S. territories and all 50 states have adopted data breach rules that require timely notification if a company has experienced the unauthorized access or acquisition of personal information. Similarly, many of the requirements mandated by the California Consumer Protection Act (“CCPA”) that went into effect on January 1, 2020 have not yet been interpreted by courts, and best practices are still being developed by the industry, all of which increase the risk of compliance failure and related adverse impacts. Furthermore, on January 1, 2023, substantive provisions of the California Privacy Rights Act (“CPRA”) became effective, in some cases requiring new or modified practices and operations. Other states enacted similar privacy laws in recent years and other states are considering doing so. These privacy laws may impose substantial penalties for violations, impose significant costs for investigations and compliance, allow private class-action litigation and carry significant potential liability for our business.

Legislators and/or regulators in foreign countries in which we operate are increasingly adopting or revising privacy, information security and data protection laws as well. In particular, the European Union’s General Data Protection Regulation (“GDPR”), which became effective on May 25, 2018, imposes additional obligations and risk upon our business and which increases substantially the penalties to which we could be subject in the event of any non-compliance. Many countries have enacted similar types of legislative and regulatory requirements concerning data protection, and additional countries are considering similar legal frameworks.

The CCPA, CPRA, GDPR and other similar laws and regulations including those recently or soon to be enacted (such as the SECs proposed cybersecurity disclosure regulations), as well as any associated inquiries or investigations or any other government actions, may be costly to comply with, result in negative publicity, increase our operating costs, require significant management time and attention to monitor and be in compliance with, and subject us to remedies that may harm our business, including fines or demands or orders that we modify or cease existing business practices.

Defects or quality issues associated with our automotive and medical products, as well as a significant product liability lawsuit, warranty claim or product recall involving us or one of our major customers, or an investigation regarding vehicle safety generally, could adversely affect the results of our operations.

Our design, manufacture and marketing of automotive products may subject us to warranty claims and product liability in the event that our products (or the products of our customers that incorporate our products) fail to perform as expected and, in the case of product liability, such failure of our products (or the products of our customers that incorporate our products) results or is alleged to result in bodily injury or property damage. This risk may be enhanced for any new developed products or recently acquired products, which has been a significant part of our growth in recent years. If any of our products are or are alleged to be defective, we also may be required by our customers or regulators to participate in a recall or other corrective action involving such products, which we have been subject to periodically. Automotive manufacturers are increasingly looking to their suppliers for contribution when faced with recalls and product liability claims, as well as requiring their suppliers to guarantee or warrant their products and bear the costs of repair and replacement of such products under new vehicle warranties. OEMs historically have recalled vehicles for perceived defects in seat heaters, and we have incurred liabilities in connection with the recalls and other field actions. In addition, governmental regulatory agencies throughout the world, such as NHTSA in the U.S., have safety standards that require manufacturers to remedy defects related to vehicle safety through safety recall campaigns, and a manufacturer is obligated to recall vehicles if it determines that the vehicles do not comply with a safety standard.

Any large liability claims, if made, could exceed our insurance coverage limits and insurance may not continue to be available on commercially acceptable terms, if at all, and we may incur significant costs to defend these claims. In addition, we may not be successful in recovering amounts from third parties, including suppliers, in connection with these claims. In certain instances, allegedly defective products may be the result of components supplied by our supply chain, and we may be limited in our ability to obtain recovery from our suppliers of materials or services included within our products that are associated with product liability and warranty claims, particularly if the affected items relate to global platforms or involve defects that are identified years after production. A recall, product liability or warranty claim brought against us that is not insured or is in excess of our available insurance, and if other third parties do not contribute or indemnify us, could have an adverse impact on our results of operations and reputation or market acceptance of our products.

The design, manufacture and marketing of medical products involve certain inherent risks. Manufacturing or design defects, component failures, unapproved or improper use of our products, or inadequate disclosure of risks or other information relating to the use of our products can lead to regulatory action, injury or other serious adverse events. These events could lead to recalls or safety alerts relating to our products (either voluntary or as required by the FDA or similar governmental authorities in other countries), and could result, in certain cases, in the removal of a product from the market. A recall, inadequate disclosure or defect could result in significant costs and lost sales and customers, enforcement actions and/or investigations by state and federal governments or other enforcement bodies, as well as negative publicity and damage to our reputation that could reduce future demand for our products. Personal injuries relating to the use of our products can also result in significant product liability claims being brought against us. In some circumstances, such adverse events could also cause delays in regulatory approval of new products or the imposition of post-market approval requirements, such as further clinical testing. Such clinical testing is costly and time-consuming and could delay market approval or the meeting of additional post-market requirements.

Our business may be negatively impacted by the effects of climate change and by regulatory and stakeholder-imposed requirements to address climate change and other sustainability issues.

As evidenced by shifting industry and consumer behaviors, including the development and use of electric vehicles, the automotive industry and consumers have a heightened focus on climate change and the environmental impact of product manufacturing and end use. This increased focus on sustainability and the environmental impact of the automotive industry and manufacturing processes has caused our customers and other stakeholders to impose additional requirements on us and our suppliers, which often exceed regulatory standards. These customer requirements include increased tracking and reporting of greenhouse gas emissions and other environmental metrics, reduced waste and wastewater from operations, increased use of sustainable materials in our products, and the use of renewable energy sources in our factory operations. We expect to incur increased operating costs and capital expenditures to procure renewable energy and additional equipment or make operational and process changes to comply with customer requirements. To the extent we are unable to meet or exceed customer sustainability requirements, demand for our products and our revenues could be adversely impacted. A failure to adequately meet other stakeholder expectations may result in the loss of business, diluted market valuation, an inability to attract customers or an inability to attract and retain top talent.

Climate change is continuing to receive ever increasing attention worldwide. Many scientists, legislators and others attribute climate change to increased levels of greenhouse gases, including carbon dioxide, which has led to and we expect will continue to lead to legislative and regulatory efforts in many jurisdictions to limit greenhouse gas emissions. New federal or state restrictions on emissions of carbon dioxide that may be imposed on vehicles and automobile fuels could adversely affect demand for vehicles, annual miles driven or the products we sell, lead to changes in automotive technology, and expedite the transition to electric vehicles. Compliance with any new or more stringent laws or regulations, or stricter interpretations of existing laws, could require increased capital expenditures to improve our product portfolio to meet such new laws, regulations and standards. Such legislative developments could adversely impact our business by increasing costs and could require us to make changes to our operations and result in substantial additional capital expenditures and operating costs. These additional costs, changes in operations, or loss of revenues could have a material adverse effect on our business, financial condition, and results of operations.

Finally, the effects of climate change, such as increased intensity, frequency or duration of storms, droughts or other severe weather events may create financial or physical risk to us. Physical risks include disrupting the manufacturing, logistics and procurement activities and employee working conditions of us, our supply chain and our customers. Financial risks include the fluctuating demand for our products and technologies based on the climate where consumers live, since our business involves thermal management technologies, as well as potential additional costs of insurance and maintaining facilities in certain regions prone to climate risk. We could also face indirect financial risks passed through the supply chain, and process disruptions due to physical climate changes could result in price modifications for our products and the resources needed to produce them. Any of the foregoing could have a material adverse effect on our financial condition and results of operations.

Our patient temperature management business is subject to extensive industry regulation and failure to comply with all applicable rules and regulation may adversely impact us.

Our patient temperature management products are subject to extensive, complex, costly and evolving government regulation. In the United States, this is principally administered by the Food and Drug Administration (“FDA”). Various regulatory agencies in foreign countries where our medical products are sold also regulate that business. Under both United States and foreign country regulations, we are subject to periodic inspection of our facilities (including third-party facilities that are performing services for us), procedures and operations and testing of our products. Following such FDA inspections, should any noncompliance with regulations

or other quality issues be noted, we may receive observations, notices, citations and/or warning letters that could require us to get FDA approval of a corrective action plan and modify certain activities identified during the inspection, possibly at a significant cost. We are also required to report adverse events associated with our medical products to the FDA and other foreign regulatory authorities where our products have been approved or received market clearance. Unexpected or serious health or safety concerns could result in liability claims, recalls, market withdrawals or other regulatory actions. Changes in laws or regulations could require us to change the way we operate or to utilize resources to maintain compliance, which could increase costs or otherwise disrupt operations. In addition, failure to comply with any applicable laws or regulations could result in fines or revocation of our operating permits and licenses or, in rare circumstances, market withdrawal of the product.

The process for obtaining governmental approval to manufacture and market new medical devices is time-consuming and costly. We are dependent on receiving FDA and other governmental or third-party approvals prior to manufacturing, marketing and shipping any new medical products. We cannot be certain that any new medical products we develop will receive FDA or other necessary approvals. Also receipt of approval in one country does not guarantee approval by the FDA or any other foreign regulatory agency.

Any failure to comply with anti-corruption laws and regulations could have a material and adverse effect on our reputation, business and financial results.

Our operations outside of the United States require us to comply with various anti-bribery and anti-corruption regulations, including but not limited to the U.S. Foreign Corrupt Practices Act, the United Kingdom Bribery Act and the China Anti-Unfair Competition Law. Violations of these laws, which are complex and often difficult to interpret and apply, could result in significant criminal penalties or sanctions that could adversely affect our business, financial condition, results of operations and cash flows.

We are involved from time to time in various legal and regulatory proceedings and claims, which could adversely affect our financial performance.

We are involved in various legal and regulatory proceedings and claims that, from time to time, are significant. These are typically claims that arise in the normal course of business including, without limitation, commercial or contractual disputes, including disputes with our customers, suppliers or competitors, intellectual property matters, personal injury claims, environmental matters, tax matters and employment matters. Such legal and regulatory proceedings could result in an adverse outcome for the Company that would adversely affect our financial condition, results of operations and cash flows.

Tax matters, including changes in the corporate tax rates, disagreement with taxing authorities and imposition of new taxes could impact our results of operations and financial condition.

We are subject to income and other taxes in the U.S. and internationally. We are also subject to regular reviews, examinations, and audits by the Internal Revenue Service and other taxing authorities with respect to our taxes. Although we believe our tax estimates are reasonable, if a taxing authority disagrees with the positions we have taken, we could face additional tax liability, including interest and penalties. There can be no assurance that payment of such additional amounts upon final adjudication of any disputes will not have a material impact on our result of operations and financial position.

We also need to comply with new, evolving or revised tax laws and regulations. The enactment of or increases in tariffs, or other changes in the application or interpretation of tax legislation and other initiatives, or on specific products that we sell or with which our products compete, may have an adverse effect on our business or on our results of operations.

The value of our deferred tax assets may not be realized, which could materially and adversely affect our operating results.

As of December 31, 2022, we had approximately \$49 million in net deferred tax assets, inclusive of a \$37 million valuation allowance. These deferred tax assets include net operating loss carryovers and tax credits that can be used to offset taxable income in future periods and reduce income taxes payable in those future periods. Each quarter, we determine the probability of the realization of deferred tax assets, using significant judgments and estimates with respect to, among other things, historical operating results and expectations of future earnings and tax planning strategies. If we determine in the future that there is not sufficient positive evidence to support the valuation of these assets, due to the risk factors described herein or other factors, we may be required to further adjust the valuation allowance to reduce our deferred tax assets. Such a reduction could result in material non-cash expenses in the period in which the valuation allowance is adjusted and could have a material adverse effect on our financial statements.

We are required to comply with environmental laws and regulations that could cause us to incur significant costs.

Our manufacturing facilities are subject to numerous laws and regulations designed to protect the environment, and we expect that additional requirements with respect to environmental matters will be imposed on us in the future. We may also assume, or be deemed to assume, significant environmental liabilities in acquisitions. Environmental liability may be imposed without regard to fault, and under certain circumstances, can be joint and several, resulting in one party being held responsible for the entire obligation. Material future expenditures may be necessary if compliance standards change or material unknown conditions that require remediation are discovered. Environmental laws could also restrict our ability to expand our facilities or could require us to acquire costly equipment or to incur other significant expenses in connection with our business. Violations of these requirements could result in fines or sanctions, obligations to investigate or remediate contamination, third party property damage or personal injury claims due to the migration of contaminants off-site, or modification or revocation of our operating permits, which could materially and adversely affect our financial condition, results of operations and cash flows.

Financial Risks

We are subject to significant foreign currency risk and foreign exchange exposure related to our global operations.

A significant portion of our global transactions is conducted in currencies other than the U.S. Dollar, including the Euro, the Chinese Renminbi, the Vietnamese Dong, the Hungarian Forint, the North Macedonian Denar, the Ukrainian Hryvnia, the South Korean Won and the Mexican Peso. While we sometimes employ financial instruments to hedge some of our transactional foreign exchange exposure, developing an effective and economical foreign currency risk strategy is complex and expensive and no strategy can completely insulate us from those exposures. Exchange rates can be volatile and could adversely affect our financial results and comparability of results from period to period. Such exchange rate volatility could also increase the costs of raw materials or components from foreign suppliers, and as a result, our profitability could be adversely affected.

Our existing indebtedness and the inability to access capital markets could restrict our business activities or our ability to execute our strategic objectives or adversely affect our financial performance.

As of December 31, 2022, our total consolidated indebtedness was \$235.1 million, with \$264.9 million available for additional borrowings under the Second Amended and Restated Credit Agreement subject to specified conditions that Gentherm currently satisfies. In 2022, we incurred significant indebtedness in connection with our acquisitions of Alfmeier and Dacheng. We may also incur additional indebtedness in the future, including in connection with additional acquisitions or significant capital expenditures. If our outstanding borrowings increase, including under existing availability of revolving credit or if we incur additional indebtedness, the amount of our outstanding debt could have important, adverse consequences to us and our investors, including:

- requiring a substantial portion of our cash flow from operations to make interest payments;
- making it more difficult to satisfy other obligations;
- increasing our vulnerability to general adverse economic and industry conditions;
- reducing the cash flow available to fund capital expenditures and other corporate purposes and to grow our businesses;
- limiting our flexibility in planning for, or reacting to, changes in our businesses and industries; and
- limiting our ability to borrow additional funds as needed or take advantage of business opportunities as they arise.

Our debt agreements contain certain restrictive covenants and customary events of default. These restrictive covenants limit our ability to take certain actions, such as, among other things: incur additional debt, create liens, make certain payments or distributions (including for the repurchase or redemption of our shares), engage in mergers or consolidations, make certain dispositions and transfers of assets, enter into transactions with affiliates and guarantee indebtedness. While not unusual for financings of the type that we have, the restrictions in our credit facilities may prevent us from taking actions that we believe would be in the best interest of our business and may make it difficult for us to execute our business plans, take advantage of business opportunities, or react to changing industry conditions.

To the extent that we incur additional indebtedness, the risks described above could increase. In addition, our actual cash requirements in the future may be greater than expected. Our ability to make payments of principal and interest on our indebtedness depends upon our future performance. If our cash flow from operations is not sufficient to service our outstanding debt or to repay the

outstanding debt as it becomes due, we may not be able to borrow money, sell assets or otherwise raise funds on acceptable terms, or at all, to service or refinance our debt and we may have to reduce or delay planned capital or operating expenditures. The occurrence of any of such events could have a material adverse effect upon our business, cash flows, financial condition and results of operations. If an event of default would occur under our existing debt agreements or any additional indebtedness, our lenders could declare all amounts outstanding to be immediately due and payable, which may cause cross-defaults under our other debt obligations. If our lenders accelerate the maturity of our indebtedness, we may not have sufficient capital available at that time to pay the amounts due to all lenders on a timely basis, and there is no guarantee that we would be able to repay, refinance, or restructure the payments on such debt. Further, under our existing credit facilities, the lenders would have the right to foreclose on certain of our assets, which could have a material adverse effect on our business, results of operations and financial condition.

We utilize various strategies to move funds between countries to manage global liquidity needs without material adverse tax consequences. Any repatriation of cash to the U.S. may result in various tax consequences and the movement of capital remains subject to evolving government regulation, which could have an adverse impact on our liquidity and cash flows.

We continue to expect to be able to move funds between different countries to manage our global liquidity needs without material adverse tax implications, subject to current monetary policies and the terms of the Second Amended and Restated Credit Agreement. We utilize a combination of strategies and currently there are no significant restrictions on the ability of our subsidiaries to pay dividends or make other distributions to Gentherm Incorporated. As of December 31, 2022, the Company's cash and cash equivalents held by our non-U.S. subsidiaries totaled \$108.6 million. If additional non-U.S. cash was needed for our U.S. operations, we may be required to accrue and pay withholding if we were to distribute such funds from non-U.S. subsidiaries to the U.S. In addition, the movement of capital between our subsidiaries and us in different countries remains subject to evolving government regulation and geopolitical stability, and our liquidity and cash flows could be impacted adversely upon regulatory and geopolitical changes in the future.

We are exposed to risks related to accounts receivable sales agreements.

We have entered into several receivables factoring arrangements, including acquired in connection with the Alfmeier acquisition, that permit us to sell certain accounts receivable on a revolving basis, subject to outstanding balances and concentration limits. These agreements permit us to recover on our accounts receivable for specific customers sooner than if they were not in place and help reduce the risk of non-payment by such customers. A limited number of our customers participate in these programs to date. If we do not enter into these agreements, our financial condition, results of operations and cash flows could be materially and adversely affected by delays or failures in collecting trade accounts receivables for the applicable customers. In addition, if any of the financial institutions with which we have these agreements experiences financial difficulties or otherwise modifies or terminates these agreements, such modification, termination or other loss of these arrangements could have a material and adverse effect upon our liquidity and cash flows.

We may be unable to realize the expected benefits of our restructuring actions, which could adversely affect our profitability and operations.

We have undertaken significant restructuring activities in recent years that remain ongoing and may take future restructuring actions to realign and resize our production capacity and cost structure, lower our cost base, improve our financial performance and cash flow generation, and create a simplified organization best positioned to deliver on our key financial and operational priorities. Charges related to these actions or any further restructuring actions may have a material adverse effect on our results of operations and financial condition. We cannot ensure that any current or future restructuring will be completed as planned, on a timely basis or at all, will be on budget, or achieve the desired results.

Common Stock Investment Risks

The price of our Common Stock may fluctuate significantly.

The price of our Common Stock on the Nasdaq Global Select Market has experienced substantial price volatility and may continue to do so in the future. Additionally, the Company, the automotive industry and the stock market as a whole have experienced significant stock price and volume fluctuations that have affected stock prices in ways that may have been unrelated to these companies' operating performance. Price volatility over a given period may cause the average price at which the Company repurchases its stock to exceed the stock's price at a given point in time. If the Company fails to meet expectations related to future

growth, profitability, share repurchases or other market expectations, its stock price may decline significantly, which could have a material adverse impact on investor confidence and employee retention.

On December 11, 2020, the Board of Directors authorized a new stock repurchase program, pursuant to which the Company is authorized to repurchase up to \$150 million of common stock over a three-year period. Repurchases may be made, from time to time, in amounts and at prices the Company deems appropriate, subject to market conditions, applicable legal requirements, debt covenants and other considerations. Any Company stock repurchases under the program may result in stock price and volume fluctuations. During the year ended December 31, 2022, the Company did not make any repurchases under the 2020 Stock Repurchase Program and have a remaining repurchase authorization of \$130.0 million as of December 31, 2022.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2022, we operate in over 32 locations across 14 countries, which are primarily for manufacturing, assembly, distribution, warehousing, engineering and testing. The majority of our Automotive facilities located outside of the U.S. are principally used in manufacturing and distribution and are located in China, Hungary, Mexico, North Macedonia, South Korea, Ukraine, Czech Republic, Germany, and Vietnam. Our global headquarters is located in Northville, Michigan, our European headquarters is located in Odelzhausen, Germany and our Asia-Pacific headquarters is located in Shanghai, China. Our Medical business is principally comprised of our headquarters and manufacturing site located in Cincinnati, Ohio and our manufacturing sites in Germany and China. We also have sales offices, warehouses and engineering centers, strategically located throughout the world. Nearly all of our manufacturing and distribution sites in Mexico and Asia are leased, while most of our European sites are owned.

ITEM 3. LEGAL PROCEEDINGS

We are subject to litigation from time to time in the ordinary course of our business, however, there is no current material pending litigation to which we are a party and no material legal proceedings were terminated, settled or otherwise resolved during the fourth quarter of the fiscal year ended December 31, 2022.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

ITEM 5. MARKET FOR THE REGISTRANT’S COMMON STOCK, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our Common Stock trades on the Nasdaq Global Select Market under the symbol “THRM.”

Holders

As of February 17, 2023, our Common Stock was held by 32 shareholders of record. A substantially greater number of holders are beneficial owners whose shares of record are held by banks, brokers and other nominees.

Dividends

We have not paid any Common Stock cash dividends since formation, and we do not expect to pay any in the foreseeable future. The payment of future dividends is within the discretion of our Board of Directors and will depend upon business conditions, our earnings and financial condition and other factors. Currently, our bank credit facilities limit payment of dividends on our Common Stock.

Stock Repurchase Program

In December 2020, the Board of Directors authorized a new stock repurchase program (the “2020 Stock Repurchase Program”), pursuant to which the Company is authorized to repurchase up to \$150 million of its issued and outstanding common stock over a three-year period, expiring December 15, 2023.

Repurchases under the 2020 Stock Repurchase Program may be made, from time to time, in amounts and at prices the Company deems appropriate, subject to market conditions, applicable legal requirements, debt covenants and other considerations. Any such repurchases may be executed using open market purchases, privately negotiated agreements or other transactions (including Rule 10b5-1 trading plans), and may be funded from cash on hand, available borrowings or proceeds from potential debt or other capital markets sources. The 2020 Stock Repurchase Program may be modified, extended or terminated at any time without prior notice.

Issuer Purchases of Equity Securities During Fourth Quarter 2022

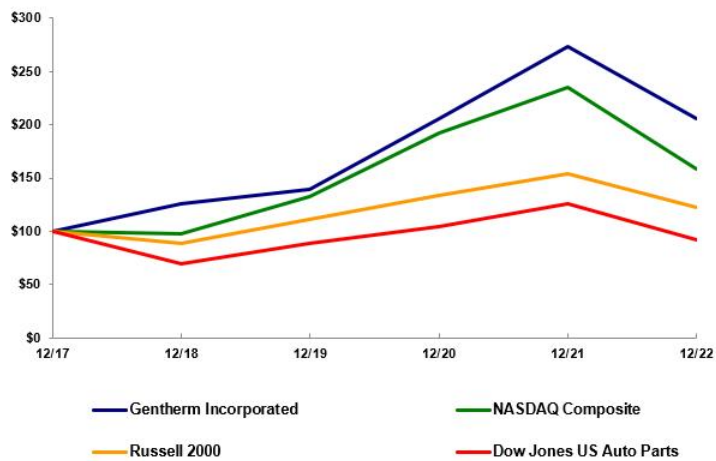
Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Repurchased as Part of Publicly Announced Plans or Programs	(d) Approximate Dollar Value of Shares That May Yet Be Purchased Under the 2020 Stock Repurchase Program
October 1, 2022 to October 31, 2022	—	\$ —	—	130,000,105
November 1, 2022 to November 30, 2022	—	\$ —	—	130,000,105
December 1, 2022 to December 31, 2022	—	\$ —	—	130,000,105

Performance graph

The following graph reflects the comparative changes in the value from December 31, 2017 through December 31, 2022, assuming an initial investment of \$100 and the reinvestment of dividends, if any, in (1) our Common Stock, (2) the NASDAQ Composite index, (3) the Russell 2000 Index and (4) the Dow Jones U.S. Auto Parts Index. Historical performance may not be indicative of future shareholder returns.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Gentherm Incorporated, the NASDAQ Composite Index,
the Russell 2000 Index and the Dow Jones US Auto Parts Index



As of December 31,

		2018	2019	2020	2021	2022	
Gentherm Incorporated	\$	100.00	\$ 125.92	\$ 139.81	\$ 205.42	\$ 273.70	\$ 205.64
NASDAQ Composite	\$	100.00	\$ 97.16	\$ 132.81	\$ 192.47	\$ 235.15	\$ 158.65
Russell 2000	\$	100.00	\$ 88.99	\$ 111.70	\$ 134.00	\$ 153.85	\$ 122.41
Dow Jones US Auto Parts	\$	100.00	\$ 69.37	\$ 88.40	\$ 103.88	\$ 125.69	\$ 92.46

ITEM 6. RESERVED

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with, and is qualified in its entirety by, our consolidated financial statements (and notes related thereto) and other more detailed financial information appearing elsewhere in this Annual Report. Further, you should read the following discussion and analysis of our financial condition and results of operations together with the “Risk Factors” included elsewhere in this Annual Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. See also “Forward-Looking Statements” in Part I of this Annual Report.

Overview

Gentherm Incorporated is the global market leader of innovative thermal management and pneumatic comfort technologies for the automotive industry. Automotive products include variable temperature Climate Control Seats, heated automotive interior systems (including heated seats, steering wheels, armrests and other components), battery performance solutions, cable systems, lumbar and massage comfort solutions, valve system technologies, and other electronic devices. Medical products include patient temperature management systems. The Company is also developing a number of new technologies and products that will help enable improvements to existing products and will lead to new product applications for existing and new markets. Our automotive products can be found on vehicles manufactured by nearly all the major OEMs operating in North America and Europe, and several major OEMs in Asia. We operate in locations aligned with our major customers’ product strategies to provide locally enhanced design, integration and production capabilities.

Our sales are driven by the number of vehicles produced by the OEMs, which is ultimately dependent on consumer demand for automotive vehicles, our product content per vehicle, and other factors that may limit or otherwise impact production by us, our supply chain and our customers. Historically, new vehicle demand and product content (i.e. vehicle features) have been driven by macroeconomic and other factors, such as interest rates, automotive manufacturer and dealer sales incentives, fuel prices, consumer confidence, employment levels, income growth trends and government and tax incentives. Vehicle content has also been driven by trends in consumer preferences, such as preferences for smart devices and features, personalized user experience, and comfort, health and wellness. Economic volatility or weakness, as well as geopolitical factors, in North America, Europe or Asia, have had and could result in a significant reduction in automotive sales and production by our customers, which have had and would have an adverse effect on our business, results of operations and financial condition. Since 2020, the automotive industry has experienced fluctuating demand and production disruptions related to supply chain challenges, facility closures, labor shortages, work stoppages and inflationary pressures, as described below. We believe our diversified OEM customer base and geographic revenue base, along with our flexible cost structure, have well positioned us to withstand the impact of industry downturns and benefit from industry upturns in the ordinary course. However, shifts in the mix of global automotive production to higher cost regions or to vehicles that contain less of our product content as well as continuing production challenges and inflationary pressures could adversely impact our profitability. In addition, we may be adversely impacted by volatility or weakness in markets for hybrid or electric vehicles specifically. We believe our products offer certain advantages for hybrid and electric vehicles, including improved energy efficiency, and position us well to withstand changes in the volume mix between vehicles driven by internal combustion engines and hybrid and other electric vehicles. We believe our industry is increasingly progressing towards a focus on human comfort and health, which is evidenced by increasing adoption rates for comfort products. We believe that products we are developing, such as ClimateSense® and our acquisition of Alfmeier’s pneumatic comfort solutions, position us well to address trends in consumer preferences such as personalized user experience, comfort, health and wellness.

Recent Trends

General Macroeconomic and Geopolitical Conditions

Since 2020, the global economy has experienced significant volatility and disrupted supply chains, which has had a widespread adverse effect on the global automotive industry. These macroeconomic conditions have resulted in longer lead times and delays in procuring component parts and raw materials, and resulted in inflationary cost increases in certain raw materials, labor and transportation. These broad-based inflationary impacts have negatively impacted the Company’s financial condition, results of operations and cash flows. Although we are optimistic that the worst of the global macroeconomic volatility is in the past, the direct and indirect impacts on our markets, operations, and financial performance have been unpredictable. As a result of this continued uncertainty, there may still be impacts on our industry, operations, workforce, supply chains, distribution systems, and demand for our products in the future which cannot be reasonably estimated at this time.

Additionally, the United States and global markets are experiencing volatility and disruption following the escalation of geopolitical tensions and the military conflict between Russia and Ukraine. In February 2022, Russia launched a full-scale military invasion of Ukraine. As a result of the conflict, the United States, United Kingdom, European Union and other countries have levied economic sanctions and bans on Russia and Russia has responded with its own retaliatory measures. These measures have impacted the price of certain raw materials and energy and could have a lasting impact on regional and global economies.

Our facility in Vynohradiv is on the far western corner within the Transcarpathia region of Ukraine near the Hungary border. In 2022, products manufactured at our Ukraine facility represented approximately 8% of the Company's total revenue, including automotive cables, seat heaters and steering wheel heaters, compared to 11% in 2021. At this time, our Ukraine facility is operating at normal levels and we continue to execute contingency plans and, in coordination with certain customers, specific equipment and production relocations leveraging our flexible global manufacturing footprint. Certain of our employees in Ukraine are routinely conscripted into the military and/or sent to the Russian border to fight in the ongoing conflict. We have incurred, and will likely continue to incur costs to support our employees and relocate equipment and production based on customer and company needs. Further, most of our products manufactured in Ukraine are shipped across the border from Ukraine to Hungary for further delivery to our customers. If that border crossing were to be closed or restricted for any reason, we may experience a significant disruption to our operations. Our response to the ongoing conflict is based on a severity level contingency response plan that has been developed with certain customers. As the situation in Ukraine is very fluid, we continue to monitor its effects on our business and we continue to work closely with our customers to adjust our contingency response as necessary.

Supply shortages of semiconductor chips and other components have resulted in decreases in global automotive vehicle production and significant volatility in customer vehicle production schedules. The Company's semiconductor suppliers, along with most automotive component supply companies that use semiconductors, including Gentherm, have been unable to fully meet the vehicle production demands of the OEMs due to events which are outside the Company's control, including but not limited to, the COVID-19 pandemic, the global semiconductor shortage, fires at suppliers' facilities, significant weather events impacting semiconductor supplier facilities in the southern United States, and other extraordinary events. The Company has experienced and may continue to experience direct impacts of ongoing shortages of semiconductors. Our ability to meet customer orders without significant delay and/or expense remains subject to significant uncertainty.

Global inflation has increased significantly over the past year. Changing costs of freight, materials, equipment, labor and other inputs used to manufacture and sell our products and logistics costs, in particular, have impacted and may in the future impact operating costs and, accordingly, may affect the prices of our products. We are involved in continuing programs to mitigate the impact of cost increases through identification of sourcing and manufacturing efficiencies where possible. However, there have been, and there may still be, impacts we are not able to fully mitigate or pass through the increases in our operating costs.

We are exposed to foreign currency risk due to the translation and remeasurement of the results of certain international operations into U.S. Dollars as part of the consolidation process. Therefore, fluctuations in foreign currency exchange rates can create volatility in the results of operations and may adversely affect our financial condition.

In response to the global supply chain instability and inflationary cost increases, the Company has taken several actions to minimize any potential and actual adverse impacts by working closely with its suppliers and customers to closely monitor the availability of semiconductor microchips and other component parts and raw materials, customer vehicle production schedules and any other supply chain inefficiencies that may arise. We expect global supply chain instability will continue to have an adverse impact on our business and financial performance for the foreseeable future, and such adverse impact may be material. The consequences of the pandemic, global supply chain instability and inflationary cost increases and their adverse impact to the global economy continue to evolve. Accordingly, the significance of the future adverse impact on our business and financial statements remains subject to significant uncertainty as of the date of this filing.

Acquisitions

On July 13, 2022, the Company completed the acquisition of Jiangmen Dacheng Medical Equipment Co. Ltd ("Dacheng") and its wholly owned subsidiary, IOB Medical, Inc. Dacheng, a privately held manufacturer of medical materials and medical equipment, including patient temperature management solutions, for numerous local and international customers. The acquisition provides Gentherm Medical a local presence in China's high-growth market for patient warming devices and other medical device products, while also expanding overall manufacturing capacity to include a low-cost manufacturing site. The total consideration for this acquisition was \$35.0 million, which is comprised of cash payments, net of cash acquired. The purchase agreement also includes future cash payments of up to \$3.0 million, contingent upon the achievement of certain performance metrics and continued

employment of the former majority shareholder through a series of defined dates. These contingent payments will be accounted for as compensation expense and will be recorded as a component of selling, general and administrative.

On August 1, 2022, the Company acquired 100% of the equity interests of Alfmeier Präzision SE (“Alfmeier”) a global leader in automotive lumbar and massage comfort solutions and a leading provider of advanced valve systems technology, integrated electronics and software. The acquisition further expands the Company’s current value proposition beyond thermal in comfort, health, wellness, and energy efficiency and aligns well with global consumer demand for expanded offerings in vehicle passenger comfort. The total consideration for this acquisition was \$170.7 million. The Company made cash payments of approximately \$170.4 million, net of cash acquired.

See Note 4, “Acquisitions” of the consolidated financial statements included in this Report for additional information.

Impairments – Non-Automotive Electronics Business

On December 31, 2022, the Company approved a plan to exit its non-automotive electronics business to strengthen the Company’s core business and focus its resources and equipment with businesses and investments that are more strategic and profitable. The Company will continue to sell certain non-automotive electronics products until the exit is complete.

The Company is evaluating a potential sale of the non-automotive electronics business or substantially all of its assets. If such sale is not pursued or is unsuccessful, the Company intends to wind-down the operations of the business over approximately eight to twelve months, subject to discussions with customers and suppliers. In the event of a wind-down, certain property, plant and equipment will be utilized by other operations of the Company.

During the year ended December 31, 2022, the Company recorded non-cash impairment charges of \$9.4 million, \$5.6 million and \$0.7 million for write downs of inventory, intangible assets and property and equipment, respectively, within the Automotive segment. Write downs of inventory are recorded in Cost of sales. Write downs of intangible assets and property and equipment are recorded in Impairment of intangible assets and property and equipment.

Light Vehicle Production Volumes

Our sales are driven by the number of vehicles produced by the automotive manufacturers, which is ultimately dependent on consumer demand for automotive vehicles, and our content per vehicle, and other factors that may limit or otherwise impact production by us, our supply chain and our customers. According to the forecasting firm S&P Global Mobility (February 2023 release), global light vehicle production in 2022 in the Company’s key markets of North America, Europe, China, Japan and Korea, as compared to 2021, are shown below (in millions of units):

	2022	2021	% Change
North America	14.3	13.0	9.7%
Europe	15.8	15.9	(0.5)%
Greater China	26.4	24.8	6.3%
Japan / South Korea	11.2	10.9	2.6%
Total light vehicle production volume in key markets	67.7	64.7	4.7%

The S&P Global Mobility report (February 2023 release) forecasted light vehicle production volume in the Company’s key markets for full year 2023 to increase to 70.0 million units, a 3.4% increase from full year 2022 light vehicle production volumes. Forecasted light vehicle production volumes are a component of the data we use in forecasting future business. However, these forecasts generally are updated monthly, and future forecasts have been and may continue to be significantly different from period to period due to changes in macroeconomic conditions or matters specific to the automotive industry. Further, due to differences in regional product mix at our manufacturing facilities, as well as material production schedules from our customers for our products on specific vehicle programs, our future forecasted results do not directly correlate with the global and/or regional light vehicle production forecasts of S&P Global Mobility or other third-party sources.

New Business Awards

We believe that innovation is an important element to gaining market acceptance of our products and strengthening our market position. During 2022, we secured an estimated \$1,793 million of automotive new business awards (inclusive of three full quarters of Alfmeier), which is at the high end of the range of new business awards in recent years. Automotive new business awards represent the aggregate projected lifetime revenue of new awards provided by our customers to Gentherm in the applicable period, with the

value based on the price and volume projections received from each customer as of the award date. Although automotive new business awards are not firm customer orders, we believe that new business awards are an indicator of future revenue. New business awards are not projections of revenue or future business as of December 31, 2022, the date of this Annual Report or any other date. Customer projections regularly change over time, and we do not update our calculation of any new business award after the date initially communicated. Automotive new business awards in 2022 also do not reflect, in particular, the impact of macroeconomic and geopolitical challenges on future business. Revenues resulting from automotive new business awards also are subject to additional risks and uncertainties as described in Item 1 under “Forward-Looking Statements” of this Annual Report.

Reportable Segments

The Company has two reportable segments for financial reporting purposes: Automotive and Medical.

See Note 19, “Segment Reporting,” to the consolidated financial statements included in this Annual Report for a description of our reportable segments as well as their proportional contribution to the Company’s reported product revenues and operating income.

Results of Operations Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

This section discusses our consolidated results of operations for the year ended December 31, 2022 compared to the year ended December 31, 2021. For a detailed discussion of our consolidated results of operations for the years ended December 31, 2021 compared to the year ended December 31, 2020, see Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operation” under “Results of Operations Year Ended December 31, 2021 Compared to December 31, 2020” in our annual report on Form 10-K for the year ended December 31, 2021, which was filed with the SEC on February 17, 2022.

The results of operations for the years ended December 31, 2022 and 2021, in thousands, were as follows:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Product revenues	\$ 1,204,656	\$ 1,046,150	\$ 158,506
Cost of sales	931,006	742,519	(188,487)
Gross margin	273,650	303,631	(29,981)
Operating expenses:			
Net research and development expenses	85,722	75,214	(10,508)
Selling, general and administrative expenses	132,693	109,554	(23,139)
Impairment of intangible assets and property and equipment	6,291	—	(6,291)
Restructuring expenses	637	3,857	3,220
Total operating expenses	225,343	188,625	(36,718)
Operating income	48,307	115,006	(66,699)
Interest expense, net	(4,294)	(2,758)	(1,536)
Foreign currency (loss) gain	(6,778)	1,487	(8,265)
Other income	1,147	117	1,030
Earnings before income tax	38,382	113,852	(75,470)
Income tax expense	13,941	20,418	6,477
Net income	\$ 24,441	\$ 93,434	\$ (68,993)

Product revenues by product category, in thousands, for the years ended December 31, 2022 and 2021 were as follows:

	Year Ended December 31,		
	2022	2021	% Change
Climate Control Seat	\$ 426,046	\$ 393,816	8.2 %
Seat Heaters	283,970	270,054	5.2 %
Steering Wheel Heaters	120,949	102,496	18.0 %
Automotive Cables	76,962	84,114	(8.5) %
Battery Performance Solutions	71,907	69,594	3.3 %
Electronics	44,106	51,648	(14.6) %
Lumbar and Massage Comfort Solutions ^(a)	56,980	—	100.0 %
Valve System Technologies ^(a)	41,980	—	100.0 %
Other Automotive	38,716	32,911	17.6 %
Subtotal Automotive segment	1,161,616	1,004,633	15.6 %
Medical segment ^(a)	43,040	41,517	3.7 %
Total Company	\$ 1,204,656	\$ 1,046,150	15.2 %

(a) Includes product revenues from acquisitions since their respective acquisition dates (see Note 4).

Product Revenues

Below is a summary of our Product revenues, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	FX	Acquisition	Pricing/ Other	Total
Product revenues	\$ 1,204,656	\$ 1,046,150	\$ 158,506	\$ 108,356	\$ (55,109)	\$ 102,322	\$ 2,937	\$ 158,506

Product revenues for the year ended December 31, 2022 increased 15.2% as compared to the year ended December 31, 2021. Revenue increased in all product categories except Electronics and Automotive Cables. The increase in product revenues is due to favorable volumes in our Automotive segment, the inclusion of sales from Alfmeier and Dacheng since the acquisitions, and the negotiation of lower annual price reductions and cost recoveries from customers, partially offset by unfavorable foreign currency impacts, primarily related to the Euro, Chinese Renminbi and Korean Won.

Cost of Sales

Below is a summary of our Cost of sales and Gross margin, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	FX	Operational Performance	Acquisitions and Other	Total
Cost of sales	\$ 931,006	\$ 742,519	\$ (188,487)	\$ (65,942)	\$ 30,778	\$ (34,056)	\$ (119,267)	\$ (188,487)
Gross margin	273,650	303,631	(29,981)	\$ 42,414	\$ (24,331)	\$ (29,696)	\$ (18,368)	\$ (29,981)
Gross margin - Percentage of product revenues	22.7 %	29.0 %						

Cost of sales for the year ended December 31, 2022 increased by 25.4% as compared to the year ended December 31, 2021. The increase in cost of sales is primarily related to increased volumes in our Automotive segment, the inclusion of expenses from Alfmeier and Dacheng since the acquisitions, inflation associated with wages, higher transportation costs and material costs, and impairment recorded related to the exit of the non-automotive electronics business. These increases were partially offset by favorable foreign currency impacts primarily attributable to the Euro and Chinese Renminbi.

Net Research and Development Expenses

Below is a summary of our Net research and development expenses, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Research and development expenses	\$ 105,914	\$ 91,807	\$ (14,107)
Reimbursed research and development expenses	(20,192)	(16,593)	3,599
Net research and development expenses	<u>\$ 85,722</u>	<u>\$ 75,214</u>	<u>\$ (10,508)</u>
Percentage of product revenues	7.1%	7.2%	

Net research and development expenses for the year ended December 31, 2022 increased 14% as compared to the year ended December 31, 2021. The increase in net research and development expenses is primarily related to the inclusion of expenses from Alfmeier since the acquisition and increased investments in ClimateSense® and battery performance solutions, partially offset by favorable foreign currency impacts.

Selling, General and Administrative Expenses

Below is a summary of our Selling, general and administrative expenses, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Selling, general and administrative expenses	\$ 132,693	\$ 109,554	\$ (23,139)
Percentage of product revenues	11.0%	10.5%	

Selling, general and administrative expenses for the year ended December 31, 2022 increased 21% as compared to the year ended December 31, 2021. The increase in selling, general and administrative expenses is primarily related to the inclusion of expenses from Alfmeier since the acquisition and increases in acquisition related costs, partially offset by lower incentive compensation and favorable foreign currency impacts.

Impairment of intangible assets and property and equipment

Below is a summary of our Impairment of intangible assets and property and equipment, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Impairment of intangible assets and property and equipment	\$ 6,291	\$ —	\$ (6,291)

Impairment of intangible assets and property and equipment primarily related to the intangible asset and property and equipment impairment recorded as a result of the Company's plan to exit its non-automotive electronics business.

Restructuring Expenses

Below is a summary of our Restructuring expenses, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Restructuring expenses	\$ 637	\$ 3,857	\$ 3,220

Restructuring expenses primarily relate to the Manufacturing Footprint Rationalization restructuring program and other discrete restructuring activities focused on optimizing our manufacturing and engineering footprint and the reduction of global overhead

expenses. See Note 5, "Restructuring and Impairments," in the notes to the consolidated financial statements included in this Annual Report for additional information.

Interest Expense

Below is a summary of our Interest expense, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Interest expense, net	\$ (4,294)	\$ (2,758)	\$ (1,536)

The increase in interest expense during the year ended December 31, 2022 compared to 2021 primarily relates to the increased interest from a higher balance on our revolving credit agreement. See Note 9, "Debt," in the notes to the consolidated financial statements included in this Annual Report for additional information.

Foreign Currency (Loss) Gain

Below is a summary of our Foreign currency (loss) gain, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Foreign currency (loss) gain	\$ (6,778)	\$ 1,487	\$ (8,265)

Foreign currency loss for the year ended December 31, 2022, included net realized foreign currency loss of \$2.1 million and unrealized net foreign currency loss of \$4.7 million.

Foreign currency gain for the year ended December 31, 2021, included net realized foreign currency loss of \$1.6 million and unrealized net foreign currency gain of \$3.1 million.

Other Income

Below is a summary of our Other income, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Other income	\$ 1,147	\$ 117	\$ 1,030

The increase in other income primarily is driven by the repayment of a loan to the buyer of Global Power Technologies, which previously was considered uncollectible and written-off.

Income Tax Expense

Below is a summary of our Income tax expense, in thousands, for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		
	2022	2021	Favorable / (Unfavorable)
Income tax expense	\$ 13,941	\$ 20,418	\$ 6,477

Income tax expense was \$13.9 million for the year ended December 31, 2022, on earnings before income tax of \$38.4 million, representing an effective tax rate of 36.3 %. The effective tax rate differed from the U.S. Federal statutory rate of 21% primarily due to the unfavorable impact of the global intangible low-tax income ("GILTI"), withholding taxes, other non-deductible expenses and acquisition costs and uncertain tax positions, offset by certain favorable tax effects on equity vesting, research and development credits in various jurisdictions and the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate.

Income tax expense was \$20.4 million for the year ended December 31, 2021, on earnings before income tax of \$113.9 million, representing an effective tax rate of 17.9%. The effective tax rate differed from the U.S. Federal statutory rate of 21% primarily due to

certain favorable tax effects on equity vesting, intercompany transactions during the year and the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, offset by the unfavorable impact of the GILTI, withholding taxes, other non-deductible expenses and uncertain tax positions.

Liquidity and Capital Resources

Overview

Our primary sources of liquidity and capital resources are cash flows from operations and borrowings available under our Second Amended and Restated Credit Agreement. Our cash requirements consist principally of working capital, capital expenditures, research and development, operating lease payments, income tax payments and general corporate purposes. We generally reinvest available cash flows from operations into our business, while opportunistically utilizing our authorized stock repurchase program. Further, we continuously evaluate acquisition and investment opportunities that will enhance our business strategies.

As of December 31, 2022, the Company had \$153.9 million of cash and cash equivalents and \$264.9 million of availability under our Second Amended and Restated Credit Agreement. See Note 13, "Financial Instruments" of the consolidated financial statements included in this Report for details regarding our factoring arrangements. Significant changes in our liquidity occurred during July 2022 in connection with the close of the Alfmeier and Dacheng acquisitions. See "Material Cash Requirements" below for further information. We may issue debt or equity securities, which may provide an additional source of liquidity. However, there can be no assurance equity or debt financing will be available to us when we need it or, if available, the terms will be satisfactory to us and not dilutive to our then-current shareholders.

We continue to expect to be able to move funds between different countries to manage our global liquidity needs without material adverse tax implications, subject to current monetary policies and the terms of the Second Amended and Restated Credit Agreement. We utilize a combination of strategies, including dividends, cash pooling arrangements, intercompany loan repayments and other distributions and advances to provide the funds necessary to meet our global liquidity needs. There are no significant restrictions on the ability of our subsidiaries to pay dividends or make other distributions to Gentherm Incorporated. As of December 31, 2022, the Company's cash and cash equivalents held by our non-U.S. subsidiaries totaled approximately \$108.6 million. If additional non-U.S. cash was needed for our U.S. operations, we may be required to accrue and pay withholding if we were to distribute such funds from non-U.S. subsidiaries to the U.S.; however, based on our current liquidity needs and strategies, we do not anticipate a need to accrue and pay such additional amounts.

We currently believe that our cash and cash equivalents and borrowings available under our Second Amended and Restated Credit Agreement, receivables factoring arrangements, and cash flows from operations will be adequate to meet anticipated cash requirements for at least the next twelve months and the foreseeable future.

Cash and Cash Flows

The table below summarizes our cash activity for each of the last two fiscal years (in thousands):

	Year Ended December 31,	
	2022	2021
Cash and cash equivalents at beginning of period	\$ 190,606	\$ 268,345
Net cash provided by operating activities	14,947	143,076
Net cash used in investing activities	(239,899)	(48,830)
Net cash provided by (used in) financing activities	189,927	(169,141)
Foreign currency effect on cash and cash equivalents	(1,690)	(2,844)
Cash and cash equivalents at end of period	<u>\$ 153,891</u>	<u>\$ 190,606</u>

Cash Flows From Operating Activities

Net cash provided by operating activities totaled \$14.9 million and \$143.1 million for the years ended December 31, 2022 and 2021, respectively. Cash flow provided by operating activities for the year ended December 31, 2022 consisted primarily of net income of \$24.4 million, increased by \$51.8 million for non-cash charges for depreciation, amortization, non-cash stock based compensation, and loss on disposition of property and equipment, \$15.9 million for inventory provisions, and impairments of intangible assets and property and equipment of \$6.3 million related to the planned exit of the non-automotive electronics business, partially offset by non-cash charges of \$7.3 million for deferred income taxes and other, and \$76.9 million related to changes in assets and liabilities. Cash flow provided by operating activities for the year ended December 31, 2021 consisted primarily of net income of \$93.4 million, increased by \$54.3 million for non-cash charges for depreciation, amortization, non-cash stock based compensation, and loss on disposition of property and equipment, partially offset by non-cash charges of \$0.5 million for deferred income taxes and other, and \$4.2 million related to changes in assets and liabilities.

Cash Flows From Investing Activities

Net cash used in investing activities totaled \$239.9 million and \$48.8 million for the years ended December 31, 2022 and 2021, respectively. The increase in usage is primarily attributable to payments for the Alfmeier and Dacheng acquisitions of \$205.5 million and increases in the purchases of property and equipment during the year ended December 31, 2022 as compared to the year ended December 31, 2021.

Cash Flows From Financing Activities

Net cash provided by financing activities totaled \$189.9 million for the year ended December 31, 2022 and net cash used in financing activities totaled \$169.1 million for the year ended December 31, 2021. Cash flows provided by financing activities for the year ended December 31, 2022 primarily included \$207.0 million of debt borrowings to fund acquisitions and \$1.7 million of proceeds from the exercise of common stock options, partially offset by \$13.1 million of debt repayments and \$5.5 million paid for employee taxes related to the net settlement of restricted stock units that vested during the year. Cash flows used in financing activities for the year ended December 31, 2021 primarily included \$153.2 million of debt repayments, \$20.0 million paid to repurchase common stock and \$4.1 million paid for employee taxes related to the net settlement of restricted stock units that vested during the year, partially offset by \$8.3 million of proceeds from the exercise of common stock options.

Debt

The following table summarizes the Company's debt at December 31, 2022 and 2021 (dollars in thousands):

	December 31,			
	2022		2021	
	Interest Rate	Principal Balance	Interest Rate	Principal Balance
Credit Agreement:				
U.S. Revolving Note (U.S. Dollar denominations)	5.80%	\$ 232,000	1.35%	\$ 35,000
Other loans	3.89% - 5.21%	2,011	5.21%	3,750
Finance leases	N/A	1,085	N/A	—
Total debt		235,096		38,750
Current maturities		(2,443)		(2,500)
Long-term debt, less current maturities		\$ 232,653		\$ 36,250

Credit Agreement

Gentherm, together with certain of its subsidiaries, maintain a revolving credit note ("U.S. Revolving Note") under its Second Amended and Restated Credit Agreement (the "Second Amended and Restated Credit Agreement") with a consortium of lenders and Bank of America, N.A. as administrative agent. The Second Amended and Restated Credit Agreement was entered into on June 10, 2022 and amends and restates in its entirety the Amended and Restated Credit Agreement dated June 27, 2019, by and among Gentherm, certain of its direct and indirect subsidiaries, the lenders party thereto and the Agent. The Second Amended and Restated Credit Agreement has a maximum borrowing capacity of \$500 million and matures on June 10, 2027. The Second Amended and Restated Credit Agreement contains covenants, that, among other things, (i) prohibit or limit the ability of the borrowers and any material subsidiary to incur additional indebtedness, create liens, pay dividends, make certain types of investments (including

acquisitions), enter into certain types of transactions with affiliates, prepay other indebtedness, sell assets or enter into certain other transactions outside the ordinary course of business, and (ii) require that Gentherm maintain a minimum Consolidated Interest Coverage Ratio and a maximum Consolidated Net Leverage Ratio (based on consolidated EBITDA for the applicable trailing four fiscal quarters) as of the end of any fiscal quarter.

Finance Leases

As of December 31, 2022, there was \$1.1 million of outstanding finance leases.

Other Sources of Liquidity

Receivable Factoring

The Company is party to receivable factoring agreements with unrelated third parties under which we can sell receivables for certain account debtors, on a revolving basis, subject to outstanding balances and concentration limits. The receivable factoring agreements are transferred in their entirety to the acquiring entities and are accounted for as a sale. Some of the agreements, including those assumed through the acquisition of Alfmeier, have deferred purchase price arrangements. See Note 13, "Financial Instruments" of the consolidated financial statements included in this Report for further details regarding our factoring arrangements.

Material Cash Requirements

The following table summarizes current and long-term material cash requirements as of December 31, 2022, which we expect to fund primarily with operating cash flows.

Material Cash Requirements (in thousands)	Payments Due by Period				
	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Long-term debt obligations (1)	\$ 2,011	\$ 2,011	\$ —	\$ —	\$ —
Operating lease obligations (2)	31,352	8,074	11,987	4,753	6,538
Finance lease obligations (2)	1,085	432	585	68	—
Purchase obligations (3)	40,130	34,809	5,321	—	—
Capital commitments (4)	6,853	6,853	—	—	—
Other	200	50	50	50	50
Total	\$ 81,631	\$ 52,229	\$ 17,943	\$ 4,871	\$ 6,588

- (1) Long-term debt obligations do not include an amount payable for interest. See Note 9, "Debt," to the consolidated financial statements included in this Annual Report for additional information.
- (2) See Note 8, "Leases," to the consolidated financial statements included in this Annual Report for additional information.
- (3) Purchase obligations are comprised of commitments to secure the supply of certain semiconductor chips. We have entered into agreements with various suppliers to reserve the rights to certain semiconductor chips over the next 12 to 24 months, with volume commitments determined based on our anticipated production requirements. Such agreements provide the Company with priority access to semiconductor chips as they become available, however, these agreements do not guarantee that our suppliers will meet our requested timing and quantity. We have not included amounts for other material and component purchase obligations related to standard recurring purchases of materials for use in our manufacturing operations as these amounts are generally consistent from year to year, closely reflect our levels of production, and are not long-term in nature. See Note 11, "Commitments and Contingencies" of the consolidated financial statements included in this Report for additional information.
- (4) Capital commitments is comprised of commitments for capital expenditures. Such commitments are typically less than one year.

Additional cash payments may be required for contingent payments of up to \$3.0 million related to the Dacheng acquisition. See Note 4, "Acquisitions," to the consolidated financial statements included in this Annual Report for additional information about the purchase prices associated with recent acquisition transactions.

Other Commitments

In December 2021, the Company committed to make a \$5 million investment in Autotech Fund III, L.P., pursuant to a limited partnership agreement. As a limited partner, the Company will periodically make capital contributions toward this total commitment amount over the expected ten year life of the fund. The Company has made contributions of approximately \$0.5 million to the Autotech Fund III, LP as of December 31, 2022. Timing of the capital contributions is unknown and therefore amounts have been excluded from the Material Cash Requirements table above.

Capital Expenditures

We anticipate capital expenditures in fiscal year 2023 of approximately \$60 million to \$70 million. We will continue support organic growth through capacity expansion in our facilities and make capital improvements as necessary. We believe cash on hand, cash generated from operations, and the borrowing capacity available under our Credit Agreement will be sufficient to support our capital expenditures.

Stock Repurchase Program

On December 11, 2020, the Board of Directors authorized the 2020 Stock Repurchase Program, pursuant to which the Company is authorized to repurchase up to \$150 million of its issued and outstanding common stock over a three-year period, expiring December 15, 2023. During the year ended December 31, 2022, the Company did not make any repurchases under the 2020 Stock Repurchase Program. The 2020 Stock Repurchase Program has \$130 million of repurchase authorization remaining as of December 31, 2022.

Repurchases may be made, from time to time, in amounts and at prices the Company deems appropriate, subject to market conditions, applicable legal requirements, debt covenants and other considerations. Any such repurchases may be executed using open market purchases, privately negotiated agreements or other transactions. Repurchases may be funded from cash on hand, available borrowings or proceeds from potential debt or other capital markets sources.

For further information related to our stock repurchase program, see Note 15, "Equity" in the notes to the consolidated financial statements included in this Annual Report.

Effects of Inflation

The automotive component supply industry has historically been subject to inflationary pressures with respect to materials and labor. In 2021 and continuing in 2022, macroeconomic effects of the COVID-19 pandemic have resulted in inflationary cost increases in certain materials and components, labor and transportation. These inflationary cost increases are expected to continue for the foreseeable future as demand remains elevated and supply remains constrained. Although the Company has developed and implemented strategies to mitigate the impact of higher material component costs and transportation costs, these strategies, together with commercial negotiations with Gentherm's customers and suppliers have not fully offset to date and may not fully offset our future cost increases. Such inflationary cost increase may increase the cash required to fund our operations by a material amount.

Critical Accounting Estimates

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). In preparing these consolidated financial statements, management was required to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and assumptions are based on our historical experience, the terms of existing contracts, our evaluation of trends in the industry, information provided by our customers and suppliers and information available from other outside sources, as appropriate. These estimates and assumptions are subject to an inherent degree of uncertainty. Because future events and their effects cannot be determined with certainty, actual results could differ from our assumptions and estimates, and such differences could be material to our financial statements.

We have identified the following estimates as our most critical accounting estimates, which are those that are most important to aid in fully understanding and evaluating the Company's financial condition and results of operations, and that require management's most subjective and complex judgments. Information regarding our other significant accounting estimates and policies are disclosed in Note 2, "Summary of Significant Accounting Policies", of the notes to the consolidated financial statements.

Impairments of Goodwill

Critical estimates: Goodwill is tested for impairment at least annually as of December 31 and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In conducting our annual impairment assessment testing, we first perform a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. If not, no further goodwill impairment testing is performed. If it is more likely than not that a reporting unit's fair value is less than its carrying amount, or if we elect not to perform a qualitative assessment of a reporting unit, we then compare the fair value of the reporting unit to the related net book value. If the net book value of a reporting unit exceeds its fair value, an impairment loss is measured and recognized.

The Company utilizes an income approach to estimate the fair value of a reporting unit and a market valuation approach to further support this analysis. The income approach is based on projected debt-free cash flow that is discounted to the present value using discount factors that consider the timing and risk of cash flows. We believe that this approach is appropriate because it provides a fair value estimate based on the reporting unit's expected long-term operating cash flow performance. This approach also mitigates the impact of cyclical trends that occur in our industry. Fair value is estimated using internally developed forecasts, as well as commercial and discount rate assumptions. The discount rate used is the value-weighted average of our estimated cost of equity and of debt ("cost of capital") derived using both known and estimated customary market metrics. Our weighted average cost of capital is adjusted to reflect a risk factor, if necessary. Other significant assumptions include terminal value growth rates and terminal value margin rates. To further support the fair value estimate determined by the income approach, the Company utilizes a market valuation approach to estimate the fair value of a reporting unit. The market approach considers historical and/or anticipated financial metrics of a reporting unit and applies valuation multiples based on recent observed transactions involving companies similar enough to the reporting units from which to draw meaningful conclusions.

Judgments and uncertainties: These fair value calculations contain uncertainties as they require management to make assumptions about future cash flows and appropriate discount rates to reflect the risk inherent in the future cash flows and to derive a reasonable enterprise value and related premium. Our ability to realize the future cash flows used in our fair value calculations is affected by factors such as the success of strategic initiatives, changes in economic conditions, changes in our operating performance and changes in our business strategies. The estimated future cash flows reflect management's latest assumptions of the financial projections based on current and anticipated competitive landscape, including estimates of revenue based on production volumes over the foreseeable future and long-term growth rates, and operating margins based on historical trends and future cost containment activities.

Also, the market valuation approach is highly subjective as it requires the selection of comparable companies and valuation multiples.

Impact if actual results differ from assumptions: As of December 31, 2022, our goodwill balance included \$73.1 million related to our Automotive segment and \$46.7 million related to our Medical segment. These balances could be fully or partially impaired if management does not achieve the expected cash flows assumed in the fair value estimates or if assumptions and cash flow estimates change in future periods.

The Company's Medical segment is comprised of one reporting unit (the "Medical Reporting Unit"). The estimated fair value of the Medical Reporting Unit exceeded its carrying value by less than 10% as of December 31, 2022. The Medical Reporting Unit is at risk of failing future impairment tests, as the estimate of fair value does not substantially exceed its carrying value. The Company's estimated future cash flow projections for the Medical Reporting Unit for the period of 2023 through 2025 assume a compound annual growth rate for revenue of approximately 24%, which we deem to be a critical assumption in the fair value determination as of December 31, 2022. This forecasted revenue growth, which is significantly higher than historical periods, is primarily driven by anticipated product launches that are expected to increase volume and price due to new features and product capabilities. Realization of this assumed revenue growth is dependent on the successful launch of these new products and product features and the acceptance of customers. If this revenue growth is not achieved or if the estimated growth rates are reduced because of new information or experience, the fair value of the Medical Reporting Unit could decrease, which could result in a material impairment of goodwill. Additionally, forecasted cash flows assume margin expansion as a direct result of the forecasted revenue growth. If we experience higher costs than assumed in our forecast or if we experience other deviations from forecasted results and/or external factors (e.g., continued increasing of interest rates), it could result in a material impairment.

For the reporting units of the Company's recently acquired Alfmeier, the estimated fair values at the acquisition date were determined to approximate the estimated fair values as of December 31, 2022. The Company had no other material reporting units in

its Automotive segment with a fair value that was not substantially in excess of its respective carrying value as of the fourth quarter of 2022.

Income Taxes

Critical estimates: The Company is subject to income taxes in the United States and numerous international jurisdictions. In calculating our effective income tax rate, we make judgments regarding certain tax positions, including the timing and amount of deductions and allocations of income among various tax jurisdictions. When determining whether we will be able to realize deferred tax assets, judgment is used to evaluate the positive and negative evidence, including forecasting taxable income using historical and future operating results. The provision for income taxes includes current income taxes as well as deferred income taxes. Deferred tax assets and liabilities are measured based on the difference between the financial statement and tax base of assets and liabilities at the applicable enacted tax rates.

Judgments and uncertainties: We have various tax filing positions with regard to the timing and amount of deductions and credits and the allocation of income among various tax jurisdictions, based on our interpretation of local tax laws, supported by external advisor review for material positions.

Valuation allowances are established when necessary on a jurisdictional basis to reduce deferred tax assets to the amounts expected to be realized when management considers it more likely than not that some portion or all of a deferred tax asset will not be realized. The determination as to whether a deferred tax asset will be realized is based on the evaluation of positive and negative evidence, which includes historical profitability, future market growth, future taxable income, the expected timing of the reversals of existing temporary differences and tax planning strategies. The Company assesses deferred taxes and the adequacy or need for a valuation allowance on a quarterly basis.

The Company is subject to ongoing tax examinations and assessments in various jurisdictions. At any time, multiple tax years are subject to audit by the various tax authorities and a number of years may elapse before a particular matter, for which a liability has been established, is audited and fully resolved or clarified. In evaluating the exposures associated with various tax filing positions, the Company may record liabilities for such exposures. The Company generally adjusts its liabilities for unrecognized tax benefits and related indemnification obligations through earnings in the period in which an uncertain tax position is effectively settled, the statute of limitations expires for the relevant taxing authority to examine the tax position, or when more information becomes available. Although management believes that the judgments and estimates discussed herein are reasonable, actual results could differ, and may materially increase or decrease the effective tax rate, as well as impact the Company's operating results.

Impact if actual results differ from assumptions: Some or all of management's judgments are subject to review by the taxing authorities. If one or more of the taxing authorities were to successfully challenge our right to realize some or all of the tax benefit we have recorded, and we were unable to realize this benefit, it could have a material adverse effect on our financial results and cash flows. Further, if the Company is unable to generate sufficient future taxable income, there is a material change in the actual effective tax rates, a change to the time period within which the underlying temporary differences become taxable or deductible, or if the tax laws change unfavorably, then the Company could be required to increase the valuation allowance against deferred tax assets, resulting in an increase in income tax expense and the effective tax rate.

For the year ended December 31, 2022, each change of the effective tax rate by one percentage point would impact income tax expense by \$0.4 million.

Business combinations

Critical estimates: The Company allocates the cost of an acquired business to the assets acquired and liabilities assumed based on their estimated fair values at the date of acquisition. The excess value of the cost of an acquired business over the estimated fair value of the assets acquired and liabilities assumed is recognized as goodwill. The valuation of the acquired assets and liabilities will impact the determination of future operating results.

Judgments and uncertainties: The Company uses a variety of information sources to determine the value of acquired assets and liabilities including: third-party appraisers for the values and lives of property, identifiable intangibles and inventories. Goodwill is assigned to reporting units as of the date of the related acquisition. If goodwill is assigned to more than one reporting unit, the Company utilizes a method that is consistent with the manner in which the amount of goodwill in a business combination is determined. Costs related to the acquisition of a business are expensed as incurred.

The Company estimates the fair value of acquired customer relationships using the multi-period excess earnings method. Value is estimated as the present value of the benefits anticipated from ownership of the asset, in excess of the returns required on the investment in contributory assets which are necessary to realize those benefits. The intangible asset's estimated earnings are determined as the residual earnings after quantifying estimated earnings from contributory assets. Assumptions used in these calculations are considered from a market participant perspective and include revenue growth rates, estimated earnings, contributory asset charges, customer attrition and discount rates.

The Company estimates the fair value of trade names and developed technology using the relief from royalty method, which calculates the cost savings associated with owning rather than licensing the assets. Assumed royalty rates are applied to projected revenue for the remaining useful lives of the assets to estimate the royalty savings. Assumptions in the determination of the fair value of the developed technology included revenue growth rates, royalty rates, obsolescence factors and discount rates. Assumptions used in the determination of the fair value of the trade name included the revenue growth rates, the royalty rate and discount rate.

Impact if actual results differ from assumptions: While the Company uses its best estimates and assumptions, fair value estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Any adjustments required after the measurement period are recorded in the consolidated statement of earnings. Future changes in the judgments, assumptions and estimates that are used in our acquisition valuations and intangible asset and goodwill impairment testing, including discount rates or future operating results and related cash flow projections, could result in significantly different estimates of the fair values in the future. An increase in discount rates, a reduction in projected cash flows or a combination of the two could lead to a reduction in the estimated fair values, which may result in impairment charges that could materially affect our financial statements in any given year.

Recent Accounting Pronouncements

For a complete description of recent accounting standards which we have not yet been required to implement which may be applicable to our operations, as well as significant accounting standards that have been adopted during the year ended December 31, 2022, see Note 3, "New Accounting Pronouncements," to the consolidated financial statements included in this Annual Report.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to various market risks including, but not limited to, changes in foreign currency exchange rates, changes in interest rates and price fluctuations of certain material commodities such as copper. Market risks for changes in interest rates relate primarily to the Company's debt obligations under the Second Amended and Restated Credit Agreement. Foreign currency exchange risks are attributable to sales to foreign customers and purchases from foreign suppliers not denominated in a location's functional currency, foreign plant operations, intercompany indebtedness, acquisitions denominated in foreign currencies, intercompany investments and include exposures to the Euro, Mexican Peso, Canadian Dollar, Hungarian Forint, North Macedonian Denar, Ukrainian Hryvnia, Japanese Yen, Chinese Renminbi, Korean Won, Czech Koruna and Vietnamese Dong.

The Company regularly enters into derivative contracts with the objective of managing its financial and operational exposure arising from these risks by offsetting gains and losses on the underlying exposures with gains and losses on the financial instruments used to hedge them. The decision of whether and when to execute derivative financial instruments, along with the duration of the instrument, may vary from period to period depending on market conditions, the relative costs of the instruments and capacity to hedge. The duration is linked to the timing of the underlying exposure, with the connection between the two being regularly monitored. The Company does not enter into derivative financial instruments for speculative or trading purposes. Some derivative contracts do not qualify for hedge accounting; for other derivative contracts, we elect to not apply hedge accounting.

The Company's designated hedging relationships are formally documented at the inception of the hedge, and hedges must be highly effective in offsetting changes to future cash flows on hedged transactions both at the inception of a hedge and on an ongoing basis to be designated for hedge accounting treatment. For derivative contracts that can be classified as a cash flow hedge, the effective portion of the change in the fair value of the derivative is recorded to Accumulated other comprehensive loss in the consolidated balance sheets. When the underlying hedge transaction is realized, the gain or loss included in Accumulated other comprehensive loss is recorded in earnings in the consolidated statements of income on the same line as the gain or loss on the hedged item attributable to the hedged risk. The Company records the ineffective portion of foreign currency and copper commodity hedging instruments, if any, to cost of sales, and the ineffective portion of interest rate swaps, if any, to interest expense in the consolidated

statements of income. Cash flows associated with derivatives are reported in net cash (used in) provided by operating activities in the Company's consolidated statements of cash flows.

Information related to the fair values of all derivative instruments in our consolidated balance sheet as of December 31, 2022 is set forth in Note 13, "Financial Instruments" in the consolidated financial statements included in this Report.

Interest Rate Sensitivity

The table presents principal cash flows and related weighted average interest rates by expected maturity dates for each of the Company's debt obligations, excluding finance leases. The information is presented in U.S. dollar equivalents, which is the Company's reporting currency.

	Expected Maturity Date					Total	Fair Value
	2023	2024	2025	2026	2027		
Liabilities							
<i>Long-Term Debt:</i>							
Variable rate	\$ —	\$ —	\$ —	\$ —	\$ 232,000	\$ 232,000	\$ 232,000
Variable interest rate as of December 31, 2022					5.80%	5.80%	
Fixed rate	\$ 2,011	\$ —	\$ —	\$ —	\$ —	2,011	\$ 2,005
Fixed interest rate	3.89% - 5.21%					3.89% - 5.21%	

Based on the amounts outstanding as of December 31, 2022, a hypothetical 100 basis point change (increase or decrease) in interest rates would impact annual interest expense by \$2.3 million. To hedge the Company's exposure to interest payment fluctuations on a portion of the borrowings, we entered into a floating-to-fixed interest rate swap agreement with a notional amount of \$100.0 million.

Exchange Rate Sensitivity

The table below provides information about the Company's foreign currency forward exchange rate agreements that are sensitive to changes in foreign currency exchange rates. The table presents the notional amounts and weighted average exchange rates by expected (contractual) maturity dates for each type of foreign currency forward exchange agreement. These notional amounts generally are used to calculate the contractual payments to be exchanged under the contract.

Anticipated Transactions and Related Derivatives	Expected Maturity or Transaction Date			Fair Value
	2023	2024	Total	
USD Functional Currency				
<i>Forward Exchange Agreements:</i>				
<i>(Receive MXN / Pay USD)</i>				
Total contract amount	\$ 27,093	\$ 12,970	\$ 40,063	\$ 3,791
Average contract rate	22.15	23.13	22.46	

The table below presents the potential gain and loss in fair value for the foreign currency derivative contracts from a hypothetical 10% change in quoted currency exchange rates.

Exchange Rate Sensitivity	2022	
	Potential loss in fair value	Potential gain in fair value
<i>Forward Exchange Agreement:(Receive MXN / Pay USD)</i>	\$ 3,999	\$ 4,888

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The audited consolidated financial statements and related financial information required to be filed hereunder are indexed on page F-1 of this Annual Report and are incorporated herein by reference.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Management of the Company, under the supervision and with the participation of the Chief Executive Officer and the Chief Financial Officer, carried out an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures as of December 31, 2022. As defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (as amended, the "Exchange Act"), disclosure controls and procedures are controls and procedures designed to provide reasonable assurance that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported on a timely basis, and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of December 31, 2022.

Management's Report on Internal Control Over Financial Reporting

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), for the Company. 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. Under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer, management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2022 based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in "Internal Control-Integrated Framework (2013)." Based on that evaluation, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2022.

Our acquisition of Dacheng became effective on July 13, 2022 and the acquisition of Alfmeier became effective on August 1, 2022. The Company currently is integrating Dacheng and Alfmeier into its operations, compliance programs and internal control processes. Dacheng and Alfmeier constituted approximately 4% and 27%, respectively, of the Company's total assets as of December 31, 2022, including the goodwill and other intangible assets recorded as part of the purchase price allocations, and less than 1% and 9%, respectively, of the Company's product revenues for the year ended December 31, 2022. SEC rules and regulations allow companies to exclude acquisitions from their assessment of internal control over financial reporting during the first year following an acquisition. The Company has excluded the acquired operations of Dacheng and Alfmeier from its assessment of the Company's internal control over financial reporting.

The attestation report of the Company's independent registered public accounting firm, regarding the effectiveness of the Company's internal control over financial reporting, is set forth in Item 15, "Exhibits and Financial Statement Schedules," included under the caption "Report of Independent Registered Public Accounting Firm".

Changes in Internal Control Over Financial Reporting

In conjunction with our recent acquisition activity, we utilized our existing framework of internal control over financial reporting specific to business combinations. The applicable controls address the various elements of a business combination, including but not limited to: 1) calculation of the consideration transferred; 2) identifying and properly accounting for transactions that are separate from the business combination; 3) use and oversight of competent and qualified personnel in performing the valuation of assets acquired and liabilities assumed; 4) review of inputs and outputs to the valuation models; 5) identifying and disclosing provisional amounts; and 6) tracking measurement period adjustments.

Except as described above with regard to the acquisition and integration of Alfmeier and Dacheng, there were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

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

The information required by this item is set forth under the following captions in our proxy statement to be filed with respect to the 2023 annual meeting of shareholders (the “Proxy Statement”), all of which is incorporated herein by reference: “Proposal No. 1 – Election of Directors”, “Board Matters – The Board of Directors”, “Board Matters – Standing Committees of the Board”, “Board Matters – Corporate Governance”, “Executive Officers” and “Additional Information – Requirements for Submission of Shareholder Proposals and Nominations for 2024 Annual Meeting.”

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this item set forth under the following captions in our Proxy Statement, all of which is incorporated herein by reference: “Board Matters – Director Compensation”, “Compensation Discussion and Analysis”, “Compensation and Talent Committee Report”, “Named Executive Officer Compensation Tables”, “Pay Versus Performance” and “CEO Pay Ratio.”

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

The information required by this item is set forth under the following captions in our Proxy Statement, all of which is incorporated herein by reference: “Security Ownership of Certain Beneficial Owners and Management” and “Proposal No. 5 – Approval of the Gentherm Incorporated 2023 Equity Incentive Plan.”

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

The information required by this item is set forth under the following captions in our Proxy Statement, all of which is incorporated herein by reference: “Board Matters – A Board Substantially Consisting of Independent Directors” and “Related Person Transactions.”

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required by this item is set forth under the following captions in our Proxy Statement, all of which is incorporated herein by reference: “Audit Committee Matters.”

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this Annual Report:

1. Financial Statements.

The following financial statements of the Company and reports of independent accountants are included in Item 15 of this Annual Report:

	<u>Page</u>
Reports of Ernst & Young LLP, Independent Registered Public Accounting Firm (PCAOB ID: 42)	F-2
Consolidated Balance Sheets	F-7
Consolidated Statements of Income	F-8
Consolidated Statements of Comprehensive Income	F-9
Consolidated Statements of Changes in Shareholders' Equity	F-10
Consolidated Statements of Cash Flows	F-11
Notes to the Consolidated Financial Statements	F-12

2. Financial Statement Schedule.

The following Schedule to Financial Statements is included herein:

Schedule II — Valuation and Qualifying Accounts.

3. Exhibits.

The exhibits to this Annual Report are as follows:

Exhibit Number	Exhibit Description	Filed/Furnished Herewith	Incorporated by Reference			
			Form	Period Ending	Exhibit / Appendix Number	Filing Date
2*	Share Purchase and Transfer Agreement, dated May 4, 2022, by and among Gebhardt Holding GmbH, ELBER GmbH, Gentherm GmbH, and Andreas Gebhardt, Markus Gebhardt and Dr. Johann Vialberth		10-Q	3/31/22	2.1	5/4/22
3.1	Second Amended and Restated Articles of Incorporation of Gentherm Incorporated		8-K		3.2	3/5/18
3.2	Amended and Restated Bylaws of Gentherm Incorporated		8-K		3.1	5/26/16
4	Description of Securities		10-K	12/31/19	4	2/20/20
10.1**	Summary of Non-Employee Director Compensation (effective starting with the 2021 annual meeting of shareholders)		10-Q	6/30/21	10.3	7/30/21
10.2**	Second Amended and Restated Gentherm Incorporated Senior Level Performance Bonus Plan		8-K		10.1	3/15/21
10.3.1**	2013 Equity Incentive Plan		Schedule 14A		A	4/22/13
10.3.2**	Amendment to the Gentherm Incorporated 2013 Equity Incentive Plan		8-K		10.2	5/19/17
10.3.3**	Second Amendment to the Gentherm Incorporated 2013 Equity Incentive Plan, effective as of May 21, 2020		8-K		10.1	5/26/20
10.3.4**	Form of Stock Option Award Agreement under the 2013 Equity Incentive Plan		8-K		10.1	6/27/13
10.3.5**	Form of Stock Appreciation Right Award Agreement under the 2013 Equity Incentive Plan		8-K		10.2	6/27/13
10.3.6**	Form of Restricted Stock Award Agreement under the 2013 Equity Incentive Plan		8-K		10.3	6/27/13
10.3.7**	Form of Restricted Stock Award Agreement (Retention Award) under the 2013 Equity Incentive Plan		8-K		10.1	10/4/17
10.3.8**	Form of Restricted Stock Unit Award Agreement (Performance-Based) under the 2013 Equity Incentive Plan		8-K		10.1	6/13/18
10.3.9**	Form of Restricted Stock Unit Award Agreement (Time-Based) under the 2013 Equity Incentive Plan		8-K		10.2	6/13/18
10.3.10**	Form of Restricted Stock Unit Award Agreement (Performance-Based) under the 2013 Equity Incentive Plan – Anversa		8-K		10.2	12/12/18
10.3.11**	Form of Restricted Stock Unit Award Agreement (Time-Based) under the 2013 Equity Incentive Plan – Anversa		8-K		10.3	12/12/18
10.3.12**	Form of Restricted Stock Unit Award Agreement (Performance-Based) under the 2013 Equity Incentive Plan (effective as of 2020 grants)		10-Q	3/31/20	10.1	5/7/20
10.3.13**	Form of Restricted Stock Unit Award Agreement (Time-Based) under the 2013 Equity Incentive Plan (effective as of 2020 grants)		10-Q	3/31/20	10.2	5/7/20
10.3.14**	Form of Restricted Stock Award Agreement (Director) under the Gentherm Incorporated 2013 Equity Incentive Plan		10-Q	6/30/20	10.7	8/4/20
10.3.15**	Form of Restricted Stock Award Agreement (Director) (effective as of 2021 grants)		10-Q	6/30/21	10.2	7/30/21

Exhibit Number	Exhibit Description	Filed/Furnished Herewith	Incorporated by Reference			
			Form	Period Ending	Exhibit / Appendix Number	Filing Date
10.3.16**	Form of Restricted Stock Unit Award Agreement under the 2013 Equity Incentive Plan (effective as of 2021 grants)		8-K		10.2	3/15/21
10.3.17**	Form of Performance Stock Unit Award Agreement under the 2013 Equity Incentive Plan (effective as of 2021 grants)		8-K		10.3	3/15/21
10.4.1	Second Amended and Restated Credit Agreement, dated as of June 10, 2022, by and among Gentherm Incorporated, Gentherm (Texas), Inc., Gentherm Licensing, Limited Partnership, Gentherm Medical, LLC, Gentherm GmbH, Gentherm Enterprises GmbH and Gentherm Licensing GmbH, the lenders party thereto, and Bank of America, N.A., as administrative agent, swing line lender and L/C issuer.		8-K		10.1	6/13/22
10.4.2	Second Amended and Restated Pledge and Security Agreement, dated as of June 10, 2022, by and among Gentherm Incorporated, Gentherm (Texas), Inc., Gentherm Medical, LLC, Gentherm Properties I, LLC, Gentherm Properties II, LLC and Bank of America, N.A.		8-K		10.2	6/13/22
10.5.1**	Employment Contract between Gentherm Incorporated and Phillip Eyler, dated as of September 18, 2017		8-K		10.1	10/3/17
10.5.2**	Amendment to Employment Terms between Gentherm Incorporated and Phillip Eyler, dated as of December 7, 2018		8-K		10.1	12/7/18
10.5.3**	Second Amendment to Employment Terms between Gentherm Incorporated and Phillip Eyler dated as of April 21, 2020		10-Q	6/30/20	10.4	8/4/20
10.6.1**	Offer Letter between Gentherm Incorporated and Matteo Anversa, dated as of October 22, 2018		8-K		10.1	12/12/18
10.6.2**	First Amendment to Offer Letter Agreement between Gentherm Incorporated and Matteo Anversa dated as of April 21, 2020		10-Q	6/30/20	10.5	8/4/20
10.6.3**	Second Amendment to Offer Letter Agreement between Gentherm Incorporated and Matteo Anversa, dated as of March 12, 2021		8-K		10.5	3/15/21
10.7.1**	Employment Contract between Gentherm GmbH and Thomas Stocker, effective September 1, 2019		10-Q	9/30/19	10.1	10/29/19
10.7.2**	First Amendment to the Employment Agreement between Gentherm Enterprises GmbH and Thomas Stocker, effective June 28, 2021		10-Q	6/30/21	10.1	7/30/21
10.8**	Offer Letter between Gentherm Incorporated and Hui (Helen) Xu, effective November 4, 2019		10-K	12/31/19	10.11	2/20/20
10.9**	Offer Letter between Gentherm Incorporated and Matt Fisch dated January 29, 2020		10-K	12/31/21	10.11	2/17/22
10.10**	Severance Pay Plan for Eligible Employees of Gentherm Incorporated		8-K		10.4	3/15/21
10.11**	Form of First Amendment to Executive Offer Letter		8-K		10.7	3/15/21
10.12.1**	Amended and Restated Gentherm Incorporated Deferred Compensation Plan, dated May 20, 2019 (and effective January 1, 2019)		10-Q	6/30/19	10.4	7/26/19
10.12.2**	Deferred Compensation Agreement, between Gentherm Incorporated and Phillip Eyler, dated as of December 31, 2018.		8-K		10.2	1/4/19
21	List of Subsidiaries (Direct and Indirect) of the Company	X				

Exhibit Number	Exhibit Description	Filed/Furnished Herewith	Incorporated by Reference			
			Form	Period Ending	Exhibit / Appendix Number	Filing Date
23.1	Consent of Ernst & Young LLP	X				
24	Power of Attorney	X				
31.1	Section 302 Certification - CEO	X				
31.2	Section 302 Certification – CFO	X				
32.1***	Section 906 Certification – CEO	X				
32.2***	Section 906 Certification - CFO	X				
101.INS	Inline XBRL Instance Document – The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.	X				
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.	X				
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X				
104	Cover Page Interactive Date File – the cover page XBRL tags are embedded within the Inline XBRL document	X				

* Schedules and exhibits to this agreement have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company agrees to furnish any omitted schedules or exhibits upon the request of the SEC.

** Indicates management contract or compensatory plan or arrangement.

*** Documents are furnished not filed.

ITEM 16. Form 10-K Summary

None.

INDEX TO FINANCIAL STATEMENTS

	Page
<u>Reports of Ernst & Young LLP, Independent Registered Public Accounting Firm (PCAOB ID: 42)</u>	F-2
<u>Consolidated Balance Sheets as of December 31, 2022 and 2021</u>	F-7
<u>Consolidated Statements of Income for the years ended December 31, 2022, 2021 and 2020</u>	F-8
<u>Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2021 and 2020</u>	F-9
<u>Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2022, 2021 and 2020</u>	F-10
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020</u>	F-11
<u>Notes to the Consolidated Financial Statements</u>	F-12

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Gentherm Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Gentherm Incorporated (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule listed in the Index at Item 15 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at 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 U.S. generally accepted accounting principles.

We also have 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 issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 24, 2023 expressed an unqualified opinion thereon.

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 matters

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

Valuation of Goodwill – Medical

Description of the Matter

As of December 31, 2022, the Company's goodwill related to the medical reporting unit (segment) was \$46.7 million. As discussed in Note 2 to the consolidated financial statements, goodwill is tested for impairment at least annually as of December 31 and whenever events or changes in circumstances indicate that it is more likely than not that a reporting unit's fair value is less than its carrying amount.

Auditing management's annual goodwill impairment assessment for the medical reporting unit was complex and highly judgmental due to the significant estimation required to determine the fair value of the reporting unit. In particular, the fair value estimates used in the valuation of the medical reporting unit were sensitive to significant assumptions, such as changes in the discount rate, revenue growth rates, including the terminal growth rate and operating margins, which are affected by expectations about future market or economic conditions.

How We Addressed the Matter in our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's annual goodwill assessment, and annual forecasting process whereby the Company develops significant assumptions that are used in its analyses. This included controls over management's review of the valuation model and the significant assumptions used in the fair value measurements discussed above.

To test the estimated fair value of the Company's medical reporting unit, we performed audit procedures that included, among others, assessing the methodologies used and directly testing the significant assumptions and the underlying data used by the Company in its analysis, including assessing the completeness and accuracy of such underlying data. We utilized internal valuation specialists to assist in the evaluation of the assumptions and other relevant information that are most significant to the fair value estimate of the reporting unit, such as assessing the fair value methodologies applied and evaluating the reasonableness of the discount rate selected by management. We compared the significant assumptions used by management to current industry and economic trends, historical performance, guideline public companies in the same industry and strategic plans. We performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the reporting unit that would result from changes in the assumptions. Furthermore, we assessed the appropriateness of the disclosures in the consolidated financial statements.

Valuation of Intangible Assets - Alfmeier Präzision SE ("Alfmeier")

Description of the Matter

During 2022, the Company completed its acquisition of Alfmeier for net consideration of \$170.7 million as disclosed in Note 4 to the consolidated financial statements. The acquisition was accounted for under the acquisition method of accounting and accordingly tangible and intangible assets acquired and liabilities assumed were recorded based on the respective estimated fair values.

Auditing the Company's accounting for its acquisition of Alfmeier was complex due to the significant estimation required in the Company's determination of the fair value of identified intangible assets of \$31.5 million, which principally consisted of customer related assets and developed technology. The significant estimation uncertainty was primarily due to the sensitivity of the respective fair values to underlying assumptions about the future performance of the acquired business. The Company used a discounted cash flow model to measure the developed technology and customer relationship intangible assets. The significant assumptions used to estimate the value of the intangible assets included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates, customer platform renewal rates and royalty rates). These significant assumptions are forward looking and could be affected by future economic and market conditions.

*How We Addressed
the Matter in our
Audit*

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's accounting for the recognition and measurement of the intangible assets. This included testing controls over management's review of the fair value methodology and significant assumptions used to develop the estimates of fair value for those intangible assets.

To test the estimated fair value of the technology and customer-related intangible assets, we performed audit procedures that included, among others, evaluating the Company's selection of the valuation methodology, evaluating the methods and significant assumptions used by the Company's valuation specialist, and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. We involved our valuation specialists to assist with our evaluation of the methodology used by the Company and significant assumptions included in the fair value estimates. We compared the significant assumptions used by management to current industry and economic trends, historical performance of the acquired entity, guideline public companies in the same industry and strategic plans. We performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the identified intangible assets. Furthermore, we assessed the appropriateness of the disclosures in the consolidated financial statements.

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 2020.

Detroit, Michigan
February 24, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Gentherm Incorporated

Opinion on Internal Control Over Financial Reporting

We have audited Gentherm Incorporated's (the Company's) internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Alfmeier Präzision SE ("Alfmeier") and Jiangmen Dacheng Medical Equipment Co. Ltd ("Dacheng"), which is included in the December 31, 2022 consolidated financial statements of the Company and constituted approximately 27% and 4% of total assets, respectively, as of December 31, 2022, and approximately 9% and 1% of revenues, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Alfmeier and Dacheng.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule listed in the Index at Item 15 and our report dated February 24, 2023 expressed an unqualified opinion thereon.

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/ ERNST & YOUNG LLP

Detroit, Michigan

February 24, 2023

GENTHERM INCORPORATED
CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

	December 31,	
	2022	2021
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 153,891	\$ 190,606
Accounts receivable, net	247,131	182,987
Inventory, net	218,248	159,477
Other current assets	64,597	32,775
Total current assets	683,867	565,845
Property and equipment, net	244,480	155,270
Goodwill	119,774	66,033
Other intangible assets, net	73,933	37,554
Operating lease right-of-use assets	29,945	24,387
Deferred income tax assets	69,840	69,630
Other non-current assets	17,461	16,624
Total assets	\$ 1,239,300	\$ 935,343
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	\$ 182,225	\$ 122,727
Current lease liabilities	7,143	5,669
Current maturities of long-term debt	2,443	2,500
Other current liabilities	93,814	82,193
Total current liabilities	285,625	213,089
Long-term debt, less current maturities	232,653	36,250
Non-current lease liabilities	20,538	19,789
Pension benefit obligation	3,638	6,832
Other non-current liabilities	24,573	5,577
Total liabilities	\$ 567,027	\$ 281,537
Shareholders' equity:		
Common Stock:		
No par value; 55,000,000 shares authorized 33,202,082 and 33,008,185 issued and outstanding at December 31, 2022 and December 31, 2021, respectively	122,658	118,646
Paid-in capital	5,447	5,866
Accumulated other comprehensive loss	(46,489)	(36,922)
Accumulated earnings	590,657	566,216
Total shareholders' equity	672,273	653,806
Total liabilities and shareholders' equity	\$ 1,239,300	\$ 935,343

The accompanying notes are an integral part of these consolidated financial statements

GENTHERM INCORPORATED
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share data)

	Year Ended December 31,		
	2022	2021	2020
Product revenues	\$ 1,204,656	\$ 1,046,150	\$ 913,098
Cost of sales	931,006	742,519	644,994
Gross margin	273,650	303,631	268,104
Operating expenses:			
Net research and development expenses	85,722	75,214	68,040
Selling, general and administrative expenses	132,693	109,554	105,044
Impairment of intangible assets and property and equipment	6,291	—	—
Restructuring expenses	637	3,857	5,803
Total operating expenses	225,343	188,625	178,887
Operating income	48,307	115,006	89,217
Interest expense, net	(4,294)	(2,758)	(4,559)
Foreign currency (loss) gain	(6,778)	1,487	(5,439)
Other income	1,147	117	2,337
Earnings before income tax	38,382	113,852	81,556
Income tax expense	13,941	20,418	21,866
Net income	\$ 24,441	\$ 93,434	\$ 59,690
Basic earnings per share	\$ 0.74	\$ 2.82	\$ 1.83
Diluted earnings per share	\$ 0.73	\$ 2.79	\$ 1.81
Weighted average number of shares – basic	33,126	33,086	32,666
Weighted average number of shares – diluted	33,503	33,510	33,028

The accompanying notes are an integral part of these consolidated financial statements

GENTHERM INCORPORATED
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Year Ended December 31,		
	2022	2021	2020
Net income	\$ 24,441	\$ 93,434	\$ 59,690
Other comprehensive (loss) income:			
Pension benefit obligations	1,826	558	(80)
Foreign currency translation adjustments	(14,081)	(21,551)	27,242
Unrealized (loss) gain on foreign currency derivative securities, net of tax	2,693	(952)	211
Unrealized (loss) gain on commodity derivative securities, net of tax	(5)	5	—
Other comprehensive (loss) income, net of tax	(9,567)	(21,940)	27,373
Comprehensive income	<u>\$ 14,874</u>	<u>\$ 71,494</u>	<u>\$ 87,063</u>

The accompanying notes are an integral part of these consolidated financial statements
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GENTHERM INCORPORATED
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(In thousands)

	Common Stock		Paid-in Capital	Accumulated Other Comprehensive	Accumulated Earnings	Total
	Shares	Amount		Loss		
Balance at December 31, 2019	32,674	\$ 102,507	\$ 10,852	\$ (42,355)	\$ 413,092	\$ 484,096
Net income	—	—	—	—	59,690	59,690
Other comprehensive income	—	—	—	27,373	—	27,373
Stock compensation, net	493	27,658	(3,394)	—	—	24,264
Stock repurchase	(246)	(9,092)	—	—	—	(9,092)
Balance at December 31, 2020	<u>32,921</u>	<u>\$ 121,073</u>	<u>\$ 7,458</u>	<u>\$ (14,982)</u>	<u>\$ 472,782</u>	<u>\$ 586,331</u>
Net income	—	—	—	—	93,434	93,434
Other comprehensive loss	—	—	—	(21,940)	—	(21,940)
Stock compensation, net	327	17,573	(1,592)	—	—	15,981
Stock repurchase	(240)	(20,000)	—	—	—	(20,000)
Balance at December 31, 2021	<u>33,008</u>	<u>\$ 118,646</u>	<u>\$ 5,866</u>	<u>\$ (36,922)</u>	<u>\$ 566,216</u>	<u>\$ 653,806</u>
Net income	—	—	—	—	24,441	24,441
Other comprehensive loss	—	—	—	(9,567)	—	(9,567)
Stock compensation, net	194	4,012	(419)	—	—	3,593
Balance at December 31, 2022	<u>33,202</u>	<u>\$ 122,658</u>	<u>\$ 5,447</u>	<u>\$ (46,489)</u>	<u>\$ 590,657</u>	<u>\$ 672,273</u>

The accompanying notes are an integral part of these consolidated financial statements

GENTHERM INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2022	2021	2020
Operating Activities:			
Net income	\$ 24,441	\$ 93,434	\$ 59,690
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	44,394	38,780	41,114
Deferred income taxes	(7,322)	(150)	849
Stock based compensation	6,599	14,530	8,829
Loss on disposition of property and equipment	771	973	683
Impairment of intangible assets and property and equipment	6,291	—	—
Provisions for inventory	15,923	2,499	1,768
Gain on sale of patents	—	—	(1,978)
Other	721	(271)	(748)
Changes in assets and liabilities:			
Accounts receivable, net	(44,221)	25,099	(46,742)
Inventory	(40,322)	(42,372)	(2,582)
Other assets	(11,906)	10,307	(11,997)
Accounts payable	28,314	8,166	29,960
Other liabilities	(8,736)	(7,919)	31,849
Net cash provided by operating activities	14,947	143,076	110,695
Investing Activities:			
Purchases of property and equipment	(39,703)	(38,468)	(17,219)
Proceeds from the sale of patents and property and equipment	248	22	2,140
Acquisition of businesses, net of cash acquired	(205,487)	(2,827)	—
Proceeds from deferred purchase price of factored receivables	5,538	—	—
Cost of technology investments	(495)	(7,557)	—
Acquisition of intangible assets	—	—	(3,141)
Net cash used in investing activities	(239,899)	(48,830)	(18,220)
Financing Activities:			
Borrowings on debt	207,000	—	201,194
Repayments of debt	(13,272)	(153,243)	(91,439)
Proceeds from the exercise of Common Stock options	1,670	8,279	16,552
Taxes withheld and paid on employees' share-based payment awards	(5,471)	(4,108)	(1,117)
Cash paid for the repurchase of Common Stock	—	(20,000)	(9,092)
Acquisition contingent consideration payment	—	(69)	(618)
Net cash provided by (used in) provided by financing activities	189,927	(169,141)	115,480
Foreign currency effect	(1,690)	(2,844)	7,442
Net (decrease) increase in cash and cash equivalents	(36,715)	(77,739)	215,397
Cash and cash equivalents at beginning of period	190,606	268,345	52,948
Cash and cash equivalents at end of period	\$ 153,891	\$ 190,606	\$ 268,345
Supplemental disclosure of cash flow information:			
Cash paid for taxes	\$ 21,645	\$ 14,857	\$ 5,013
Cash paid for interest	\$ 6,338	\$ 2,378	\$ 4,204

The accompanying notes are an integral part of these consolidated financial statements

GENTHERM INCORPORATED
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share data)

Note 1 — Overview

Gentherm Incorporated, a Michigan corporation, and its consolidated subsidiaries (“Gentherm”, “we”, “us”, “our” or the “Company”) is a global developer, manufacturer and marketer of innovative thermal management and pneumatic comfort technologies for a broad range of heating, cooling and temperature control applications, as well as lumbar and massage comfort solutions, primarily in the automotive and medical industries. Within the automotive industry, our products provide solutions for passenger comfort and convenience, battery thermal management and cell connecting systems. Within the medical industry our products provide patient temperature management solutions. Our automotive products can be found on vehicles manufactured by nearly all the major automotive original equipment manufacturers (“OEMs”) operating in North America and Europe, and several major OEMs in Asia. We operate in locations aligned with our major customers’ product strategies to provide locally enhanced design, integration and production capabilities. The Company also is developing a number of new technologies and products that are expected to enable improvements to existing products and will lead to new product applications for existing and new markets.

On July 13, 2022, Gentherm acquired Jiangmen Dacheng Medical Equipment Co. Ltd (“Dacheng”), a manufacturer of medical materials and medical equipment, including patient temperature management solutions. The acquisition was accounted for as a business combination within our Medical segment.

On August 1, 2022, Gentherm acquired Alfmeier Präzision SE (“Alfmeier”), a global leader in automotive lumbar and massage comfort solutions and a leading provider of advanced valve systems technology, integrated electronics and software. The acquisition was accounted for as a business combination within our Automotive segment.

See Note 4, “Acquisitions,” to the consolidated financial statements included in this Annual Report for additional information.

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”).

Principles of Consolidation

The consolidated financial statements include the accounts of the Company, its wholly owned subsidiaries and those entities in which it has a controlling financial interest. The Company evaluates its relationship with other entities for consolidation and to identify whether such entities are variable interest entities (“VIE”) and to assess whether the Company is the primary beneficiary of such entities. Investments in affiliates in which Gentherm does not have control but does have the ability to exercise significant influence over operating and financial policies are accounted for under the equity method. When Gentherm does not have the ability to exercise significant influence (generally when ownership interest is less than 20%), investments in affiliates are measured at cost, less impairments, adjusted for observable price changes in orderly transactions for identical or similar investments of the same issuer.

Intercompany transactions and balances between consolidated businesses have been eliminated.

Use of Estimates

In preparing these consolidated financial statements, management was required to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and assumptions are based on our historical experience, the terms of existing contracts, our evaluation of trends in the industry, information provided by our customers and suppliers and information available from other outside sources, as appropriate. These estimates and assumptions are subject to an inherent degree of uncertainty. We are not presently aware of any events or circumstances that would require us to update such estimates and assumptions or revise the carrying value of our assets or liabilities. Our estimates may change, however, as new events

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

occur and additional information is obtained. As a result, actual results may differ significantly from our estimates, and any such differences may be material to our financial statements.

Business combinations

In accordance with ASC Topic 805, "Business Combinations," acquisitions are recorded using the acquisition method of accounting. The Company includes the operating results of acquired entities from their respective dates of acquisition. The Company recognizes and measures the identifiable assets acquired, liabilities assumed, and any non-controlling interest as of the acquisition date fair value. The excess, if any, of total consideration transferred in a business combination over the fair value of identifiable assets acquired, liabilities assumed and any non-controlling interest is recognized as goodwill. Costs incurred as a result of a business combination other than costs related to the issuance of debt or equity securities are recorded in the period the costs are incurred. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to assets acquired and liabilities assumed with the corresponding offset to goodwill.

Segment Reporting

The Company has two reportable segments: *Automotive* and *Medical*.

The Automotive reporting segment is comprised of the results from our global automotive businesses, including the design, development, manufacturing and sales of automotive climate comfort systems, automotive cable systems, lumbar and massage comfort solutions, valve system technologies, battery performance solutions, and automotive electronic and software systems.

The Medical reporting segment is comprised of the results from the patient temperature management business in the medical industry. Patient temperature management includes temperature management systems across multiple product categories addressing the needs of hyper-hypothermia therapy in intensive care, normothermia in surgical procedures and additional warming/cooling therapies utilized in acute care, ambulatory, clinics and home health.

Revenue Recognition

Revenue is recognized from agreements containing enforceable rights and obligations, when promised goods are delivered or services are completed. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from Product revenues. Shipping and handling fees billed to customers are included in Product revenues, while costs of shipping and handling are included in Cost of sales.

Automotive Revenues

The Company provides production parts to its customers under long-term supply agreements ("LTAs"). The duration of an LTA is generally consistent with the life cycle of a vehicle; however, a LTA does not reach the level of a performance obligation until Gentherm receives either a purchase order and/or a materials release from its customer for a specific number of production parts at a specified price, at which point an enforceable contract exists. Revenue is recognized when control of the production parts has transferred to the customer according to the terms of the contract, which typically occurs when the parts are shipped or delivered to the customer's premises. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring production parts.

Certain LTAs provide for annual price reductions over the production life of the vehicle. Agreements that are determined to provide customers with purchase option discounts that would not be received without entering into the contract are considered to contain a material right (for example, a discount given to a customer that is incremental to the range of discounts typically given to that class of customer). The material right represents a purchase option that provides the customer with the ability to purchase additional production parts at a set price in the future and is accounted for as a separate performance obligation. Under these circumstances, each transfer of production parts under the LTA requires allocation of the purchase price to the production part and the purchase option. As a practical alternative to estimating the standalone selling price of an option, the Company allocates transaction

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

price to the purchase option by reference to the production part volumes expected to be ordered and the consideration expected to be received over the life of the vehicle program.

The production part's relative standalone selling price observed under the LTA is subtracted from the total amount of consideration expected to be received in exchange for transferring of parts under the current contract and the difference is allocated to the purchase option. Revenue from options containing a material right is recognized when the amounts billed to the customer for production parts transferred, under the LTA, is less than the standalone selling price of those production parts.

Medical Revenues

Revenues from our patient temperature management business unit are generated from the sale of products and equipment. Our medical products and equipment focus on body and blood temperature management. The Company sells medical products and equipment primarily through distributor and group purchasing organization agreements. These agreements allow member participants to the distributor or group purchasing organization to make purchases at discounted prices negotiated by the distributor or group purchasing organization. A rebate is incurred at the point in time a member participant purchases product covered under these types of agreements. Rebates are accounted for as variable consideration, using an expected value, probability weighted approach, based on the level of sales to the distributor and the time lag between the initial sale and the rebate claim in determining the transaction price of a contract. Revenue is recognized at the point in time the medical products or equipment is transferred to the customer.

Assets Recognized from the Costs to Obtain a Contract with a Customer

The Company has no material contract assets or contract liabilities as of December 31, 2022.

The Company recognizes an asset for the incremental costs of obtaining a contract with a customer if the benefits of those costs are expected to be realized for a period greater than one year. Total capitalized costs to obtain a contract were \$2,239 and \$1,946 as of December 31, 2022 and 2021, respectively. These amounts are recorded in Other non-current assets and are being amortized into Product revenues over the expected production life of the applicable program. During the year ended December 31, 2022 and 2021, \$78 and \$174, respectively, was amortized into Product revenues.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of less than 90 days to be cash equivalents. Cash balances in individual banks may exceed the federally insured limit by the Federal Deposit Insurance Corporation. The Company had Cash and cash equivalents of \$108,620 and \$161,496 held in foreign jurisdictions as of December 31, 2022 and 2021, respectively.

Disclosures About Fair Value of Financial Instruments

The carrying amounts of financial instruments comprising cash and cash equivalents, short-term investments, accounts receivable, notes receivable and accounts payable approximate fair value because of the short maturities of these instruments. The carrying amount of the Company's revolving credit note under the June 10, 2022 amended and restated credit agreement ("Credit Agreement") approximates its fair value because interest charged on the loan balance is variable. See Note 14, "Fair Value Measurement," for information about the techniques used to assess the fair value of financial assets and liabilities, including our fixed rate debt instruments.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Concentration of Credit Risk

Financial assets, which subject the Company to concentration of credit risk, consist primarily of cash equivalents, short-term investments, accounts receivable and notes receivable. Cash equivalents consist primarily of money market funds managed by major financial services companies. The credit risk for these cash equivalents is considered low. The Company does not require collateral from its customers. As of December 31, 2022, the Company's Automotive customers, Adient and Lear both individually represented 18% and 17%, respectively, of the Company's accounts receivable balance. As of December 31, 2021, the Company's Automotive customers, Adient and Lear both individually represented 22% and 18%, respectively, of the Company's accounts receivable balance.

Accounts Receivable

Accounts receivable are stated at the invoiced amount, less allowance for doubtful accounts for estimated amounts not expected to be collected, and do not bear interest. The Company determines the allowances based on historical write-off experience by industry and regional economic data, current expectations of future credit losses and historical cash discounts. The Company's accounts receivables are continually assessed for collectability and any allowance is recorded based upon the age of outstanding receivables, historical payment experience and customer creditworthiness. We write-off accounts receivable when they become uncollectible. The allowance for doubtful accounts was \$1,220 and \$1,399 as of December 31, 2022 and 2021, respectively.

The reconciliation of the beginning and ending amount of the allowance for doubtful accounts is as follows:

	Year Ended December 31,		
	2022	2021	2020
Balance at beginning of year	\$ 1,399	\$ 1,161	\$ 1,193
Charged to costs and expenses	1,088	1,066	1,298
Other activity	-	(12)	33
Deductions from reserves	(1,267)	(816)	(1,363)
Balance at end of year	<u>\$ 1,220</u>	<u>\$ 1,399</u>	<u>\$ 1,161</u>

Primarily in the Asia-Pacific region, the Company receives bank notes from certain customers to settle trade receivables. The collection of such bank notes is included in operating cash flows based on the substance of the underlying transactions, which are operating in nature. Bank notes held by the Company are classified as notes receivable within other current assets. The Company may hold such bank notes until maturity, exchange them with suppliers to settle liabilities, or sell them to third-party financial institutions in exchange for cash.

Inventory

The Company's inventory is measured at the lower of cost or net realizable value. Raw materials, components and consumables are measured using the weighted average cost method. Work-in-process and finished goods are measured using the first-in first-out method. If the net realizable value expected on the reporting date is below cost, a write-down is recorded to adjust inventory to its net realizable value. We recognize a reserve for obsolete and slow-moving inventories based on estimates of future sales and an inventory item's capacity to be repurposed for a different use. We consider the number of months' supply on hand based on current planned requirements, uncommitted future projections and historical usage in estimating the inventory reserve.

Property and Equipment

Property and equipment, including additions and improvements, are recorded at cost less accumulated depreciation. Expenditures for general repairs and maintenance are charged to expense as incurred. When property or equipment is retired or otherwise disposed of, the related cost and accumulated depreciation are removed from the accounts. Gains or losses from retirements and disposals are recorded as Operating income or expense. The Company evaluates the recoverability of long-lived assets when events and circumstances indicate that the assets may be impaired and the undiscounted net cash flows estimated to be generated by those assets are less than their carrying value. If the net carrying value exceeds the fair value, an impairment loss exists and is calculated based on either estimated salvage value or estimated orderly liquidation value.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Depreciation is computed using the straight-line method. The estimated useful lives of the Company's Property and equipment are as follows:

Asset Category	Useful Life
Buildings and improvements	1 to 30 years
Plant and equipment	10 years
Production tooling	2 to 10 years
Leasehold improvements	Term of lease
Information technology	1 to 5 years

The Company recognized depreciation expense of \$33,730, \$29,622 and \$31,037 for the years ended December 31, 2022, 2021 and 2020, respectively.

Tooling

The Company incurs costs related to tooling used in the manufacture of products sold to its customers. In some cases, the Company enters into contracts with its customers whereby the Company incurs the costs to design, develop and purchase tooling and is then reimbursed by the customer under a reimbursement contract. Tooling costs that will be reimbursed by customers are included in Other current assets in the accompanying consolidated balance sheets at the lower of accumulated cost or the customer reimbursable amount. As of December 31, 2022 and 2021, the Company had \$15,267 and \$3,778, respectively, of reimbursable tooling costs capitalized. Company-owned tooling is included in Property and equipment and depreciated over its expected useful life, generally two to ten years.

Goodwill and Other Intangible Assets

Goodwill and other intangible assets recorded in conjunction with business combinations are based on the Company's estimate of fair value, as of the date of acquisition.

Amortization of other intangible assets is computed using the straight-line method. The fair value and corresponding useful lives for acquired intangible assets are listed below as follows:

Asset Category	Useful Life
Customer relationships	8 to 15 years
Technology	5 to 12 years
Product development costs	5 to 10 years
Trade names	Indefinite
Software development costs	4 to 5 years

Our business strategy largely centers on designing products based upon internally developed and purchased technology, and we protect certain technology with patents that have value to our business strategy. All costs associated with the development and issuance of new patents are expensed as incurred. Such costs are classified as research and development expenses in the accompanying consolidated statements of income.

Impairments of Other Intangible Assets and Goodwill

Goodwill is tested for impairment at least annually as of December 31 and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In conducting our annual impairment assessment testing, we first perform a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. If not, no further goodwill impairment testing is performed. If it is more likely than not that a reporting unit's fair value is less than its carrying amount, or if we elect not to perform a qualitative assessment of a reporting unit, we then compare the fair value of the reporting unit to the related net book value. If the net book value of a reporting unit exceeds its fair value, an impairment loss is measured and recognized.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The Company utilizes an income approach to estimate the fair value of a reporting unit and a market valuation approach to further support this analysis (level 3). The income approach is based on projected debt-free cash flow that is discounted to the present value using discount factors that consider the timing and risk of cash flows. We believe that this approach is appropriate because it provides a fair value estimate based on the reporting unit's expected long-term operating cash flow performance. This approach also mitigates the impact of cyclical trends that occur in our industry. Fair value is estimated using internally developed forecasts, as well as commercial and discount rate assumptions. The discount rate used is the value-weighted average of our estimated cost of equity and of debt ("cost of capital") derived using both known and estimated customary market metrics. Our weighted average cost of capital is adjusted to reflect a risk factor, if necessary. Other significant assumptions include terminal value growth rates and terminal value margin rates. While there are inherent uncertainties related to the assumptions used and to management's application of these assumptions to this analysis, we believe that the income approach provides a reasonable estimate of the fair value of a reporting unit.

The Company performs its indefinite-lived intangible asset impairment assessment annually as of December 31, and between annual assessments if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

Investments in non-consolidated affiliates

During 2021, the Company's Automotive segment invested \$5,200 for an ownership interest in Carrar Ltd. ("Carrar"), an Israel-based technology developer of advanced thermal management systems for the electric mobility market. The Company determined that Carrar is a VIE; however, the Company does not have a controlling financial interest or have the power to direct the activities that most significantly affect the economic performance of the investment. Therefore, the Company has concluded that it is not the primary beneficiary. Gentherm's investment in Carrar is measured at cost, less impairments, adjusted for observable price changes in orderly transactions for identical or similar investments of the same issuer, and is recorded in Other non-current assets.

During 2021, the Company's Automotive segment invested \$2,357 for an ownership interest in Forciot Oy ("Forciot"), a Finland-based technology developer of sensors for touch, motion and force measurement. Gentherm's investment in Forciot is measured at cost, less impairments, adjusted for observable price changes in orderly transactions for identical or similar investments of the same issuer, and is recorded in Other non-current assets.

In December 2021, the Company committed to make a \$5,000 investment in Autotech Fund III, L.P., pursuant to a limited partnership agreement. As a limited partner, the Company will periodically make capital contributions toward this total commitment amount over the expected ten-year life of the fund. The Company has made contributions totaling approximately \$495 to the Autotech Fund III, LP as of December 31, 2022. This fund focuses broadly on the automotive industry and compliments the Company's innovation strategy.

Research and Development Expenses

Research and development activities are expensed as incurred. The Company groups development and prototype costs and related reimbursements in research and development.

Leases

The Company has operating leases for office, manufacturing and research and development facilities, as well as land leases for certain manufacturing facilities that are accounted for as operating leases. We also have operating leases for office equipment and automobiles. Excluding land leases, our leases have remaining lease terms ranging from less than 1 year to 9 years and may include options to extend the lease. Land leases have remaining lease terms that range from 3 to 40 years and some which specify that the end of the lease term is at the discretion of the lessee. We do not have lease arrangements with related parties.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The Company determines whether a contractual arrangement is or contains a lease at inception. Leases that are operating in nature are recognized in Operating lease right-of-use assets, Current lease liabilities and Non-current lease liabilities in the accompanying consolidated balance sheets. Finance leases are included in property and equipment, net, current maturities of long-term debt, and long-term debt on the Company's consolidated balance sheets.

Lease liabilities are measured initially at the present value of the sum of the future minimum rental payments at the commencement date of the lease. Lease payments that will vary in the future due to changes in facts and circumstances are excluded from the calculation of rental payments, unless those variable payments are based on an index or rate. Rental payments are discounted using an incremental borrowing rate, unless there is a rate implicit in the lease agreement. The incremental borrowing rate is based on the Company's credit rating, determined on a fully collateralized loan basis from information available at commencement date, and the duration of the lease term (the "reference rate"). Judgment is used to assess the importance of risk factor inputs during the computation of the Company's credit rating. For leases at foreign subsidiaries denominated in U.S. Dollars, a risk premium associated with the borrower subsidiary's country is added to the reference rate. For significant leases at foreign subsidiaries denominated in a foreign currency, the U.S. Dollar risk free rate with a duration similar to that of the lease term is subtracted from the reference rate and a corresponding foreign currency risk free rate with a duration similar to that of the lease term is added to the reference rate.

Operating lease right-of-use assets are measured at the amount of the lease liability, adjusted for prepaid or accrued lease payments, lease incentive received, and initial direct costs incurred, as applicable. Periods covered by an option to extend the lease are initially included in the measurement of an operating lease right-of-use asset and lease liability only when it is reasonably certain we will exercise the option. Gentherm's lease agreements do not contain residual value guarantees or impose restrictions or covenants on the Company.

For all classes of underlying assets, the Company accounts for leases that contain separate lease and non-lease components as containing a single lease component. The Company does not recognize lease right-of-use assets and lease liabilities from leases with an original lease term of 12 months or less and, instead, recognizes rent payments on a straight-line basis over the lease term in the consolidated statements of income.

Income Taxes

The Company records income tax expense using the liability method which specifies that deferred tax assets and liabilities be measured each year based on the difference between the financial statement and tax base of assets and liabilities at the applicable enacted tax rates. A valuation allowance is provided for deferred tax assets when management considers it more likely than not that the asset will not be realized. At December 31, 2022 and 2021, a valuation allowance has been provided for certain deferred tax assets which the Company has concluded are more likely than not to not be realized. If future annual taxable income were to be significantly less than current and projected levels, there is a risk that certain of our deferred tax assets not already provided for by the valuation allowance would expire prior to utilization.

The Company recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more likely than not sustain the position following an audit. For tax positions meeting the more-likely-than-not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority. The Company recognizes interest and penalties related to income tax matters in Income tax expense.

Derivative Financial Instruments – Hedge Accounting

All derivative instruments are required to be reported on the balance sheet at fair value unless the transactions qualify and are designated as normal purchases or sales. Changes in fair value are reported currently through earnings unless they meet hedge accounting criteria. The Company's designated hedging relationships are formally documented at the inception of the hedge, and hedges must be highly effective in offsetting changes to future cash flows on hedged transactions both at the inception of a hedge and on an ongoing basis to be designated for hedge accounting treatment.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The Company accounts for its designated derivative financial instruments as cash flow hedges. For derivative contracts which are designated as a cash flow hedge, the effective portion of the change in the fair value of the derivative contract is recorded to Accumulated other comprehensive loss ("AOCI") in the accompanying consolidated balance sheets. When the underlying hedge transaction is realized, the gain or loss included in AOCI is recorded into earnings in the accompanying consolidated statements of income on the same line as the gain or loss on the hedged item attributable to the hedged risk. Any ineffective portion of the gain or loss is recognized in the accompanying consolidated statements of income under Foreign currency gain (loss) for foreign currency derivatives, and cost of goods sold for commodity derivatives. These hedging transactions and the respective correlations meet the requirements for hedge accounting.

Exposure to fluctuations in interest rates and certain commodity prices are managed by entering into swaps with various counterparties. The Company does not enter into derivative transactions for speculative or trading purposes. As part of the hedging program approval process, Gentherm identifies the specific financial risk which the derivative transaction will minimize, the appropriate hedging instrument to be used to reduce the risk and the correlation between the financial risk and the hedging instrument. Hedge positions, as well as the correlation between the transaction risks and the hedging instruments, are reviewed on an ongoing basis.

Earnings per Share

Basic earnings per share is computed by dividing net income by the weighted average number of shares of common stock outstanding during the respective period. The Company's diluted earnings per share give effect to all potential shares of common stock outstanding during a period that do not have an anti-dilutive impact to the calculation. In computing the number of diluted shares outstanding, the treasury stock method is used in order to arrive at a net number of shares created upon the conversion of common stock equivalents.

Stock Based Compensation

Share based payments that involve the issuance of common stock to employees, including grants of employee stock options, restricted stock, and time-based and performance-based restricted stock units, are recognized in the consolidated financial statements as compensation expense based upon the fair value on the date of grant.

Share based payments that are satisfied only by the payment of cash, such as stock appreciation rights, are accounted for as liabilities. The liability is reported at market value of the vested portion of the underlying units. During each period, the change in the liability is recorded as compensation expense.

Note 3 — New Accounting Pronouncements**Recently Adopted Accounting Pronouncements***Reference Rate Reform*

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (Topic 848): Facilitation of Effects of Reference Rate Reform on Financial Reporting”. ASU 2020-04 provides practical expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by the amendments in this update apply only to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate or another reference rate expected to be discontinued as a result of reference rate reform. These amendments are not applicable to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022. In January 2021, the FASB subsequently issued ASU 2021-01, “Reference Rate Reform (Topic 848): Scope” to clarify that certain optional expedients and exceptions in Topic 848 for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition. ASU 2020-04 and ASU 2021-01 are effective as of March 12, 2020 through December 31, 2022 and may be applied retrospectively to contract modifications and hedging relationships from the beginning of an interim period that includes or is subsequent to March 12, 2020, or on a prospective basis to new modifications from any date within an interim period that includes or is subsequent to the date of the issuance of a final update, up to the date that financial statements are available to be issued. Upon adoption of this standard, the Company does not expect it to have a material impact to the Company’s financial statements.

Note 4 – Acquisitions*Alfmeier Präzision SE*

On August 1, 2022, the Company acquired 100% of the equity interests of Alfmeier, a global leader in automotive lumbar and massage comfort solutions and a leading provider of advanced valve systems technology, integrated electronics and software. The acquisition further expands the Company’s current value proposition beyond thermal to comfort, health, wellness, and energy efficiency and aligns with global consumer demand for expanded offerings in vehicle passenger comfort.

The total consideration transferred was \$170,700, including cash consideration of \$170,439 and amounts due to seller of \$261. The results of Alfmeier’s operations are reported within the Automotive segment from the acquisition date.

The following table provides product revenues and operating income from Alfmeier that are included in our consolidated financial statements:

	Year Ended December 31,	
	2022	
Product revenues	\$	98,960
Net loss		(2,675)

Assets acquired and liabilities assumed were recorded at estimated fair values based on third-party valuations, management’s estimates, available information, and supportable assumptions that management considered reasonable.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The following table summarizes the purchase consideration to the fair values of assets acquired and liabilities assumed as of the acquisition date and subsequent measurement period adjustments:

	Initial Allocation as of August 1, 2022	Measurement Period Adjustments	Revised Allocation as of December 31, 2022
Purchase price, consideration, net of cash acquired ^(a)	\$ 164,887	\$ 5,813	\$ 170,700
Accounts receivable	24,988	(121)	24,867
Inventory	36,026	(106)	35,920
Prepaid expenses and other assets	20,920	(74)	20,846
Operating lease right-of-use assets	4,608	—	4,608
Property and equipment	89,942	1,242	91,184
Other intangible assets	22,668	8,791	31,459
Goodwill	43,678	(9,184)	34,494
Assumed liabilities	(55,994)	975	(55,019)
Deferred tax liabilities	(21,949)	4,290	(17,659)
Net assets acquired	<u>\$ 164,887</u>	<u>\$ 5,813</u>	<u>\$ 170,700</u>

(a) Purchase price includes cash paid of \$170,439 plus amounts due to seller of \$261.

The following table summarizes the allocation of the purchase consideration to the other intangible assets acquired:

	Preliminary Fair Value	Weighted Average Life (in years)
Definite-lived:		
Customer related	\$ 19,812	14
Technology	11,647	9
Total	<u>\$ 31,459</u>	

The fair value of the intangible assets was based on third-party valuations and management's estimates, generally utilizing income and market approaches. Goodwill recognized in this transaction is primarily attributable to the Company's expected future economic benefits from combining operations to offer more compelling and high-value solutions across complementary customer relationships as well as expected future synergies. The goodwill is not expected to be deductible for tax purposes.

The following unaudited pro forma information represents our product revenues and net income as if the acquisition of Alfmeier had occurred as of January 1, 2021:

	Year Ended December 31,	
	2022	2021
Product revenues	\$ 1,348,295	\$ 1,304,505
Net Income	17,645	92,079

Jiangmen Dacheng Medical Equipment Co. Ltd

On July 13, 2022, the Company acquired 100% of the equity interests of Dacheng and its wholly owned subsidiary, IOB Medical, Inc. Dacheng, is a manufacturer of medical materials and medical equipment, including patient temperature management solutions, for numerous local and international customers. The acquisition provides Gentherm Medical a local presence in China's high-growth market for patient warming devices and other medical device products, while also expanding overall manufacturing capacity to include a low-cost manufacturing site.

The total consideration was \$35,048, which is comprised of cash payments, net of cash acquired. The purchase agreement also includes future cash payments of up to \$3,000, contingent upon the achievement of certain performance metrics and continued employment of the former majority shareholder through a series of defined dates. These contingent payments will be accounted for as compensation expense and will be recorded as a component of selling, general and administrative.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The results of Dacheng's operations are reported within the Medical segment from the date of acquisition. The following table provides product revenues and operating income from Dacheng that are included in our consolidated financial statements:

	Year Ended December 31,
	2022
Product revenues	\$ 3,499
Net Loss	(217)

Assets acquired and liabilities assumed were recorded at estimated fair values based on third-party valuations, management's estimates, available information, and supportable assumptions that management considered reasonable.

The following table summarizes the purchase consideration to the fair values of assets acquired and liabilities assumed as of the acquisition date and subsequent measurement period adjustments:

	Initial Allocation as of July 13, 2022	Measurement Period Adjustments	Revised Allocation as of December 31, 2022
Purchase price, cash consideration, net of cash acquired	\$ 35,048	\$ —	\$ 35,048
Accounts receivable	746	(84)	662
Inventory	1,942	(177)	1,765
Prepaid expenses and other assets	152	22	174
Operating lease right-of-use assets	841	—	841
Property and equipment	684	—	684
Other intangible assets	19,094	965	20,059
Goodwill	22,995	(3,979)	19,016
Assumed liabilities	(2,799)	(40)	(2,839)
Deferred tax liabilities	(8,607)	3,293	(5,314)
Net assets acquired	\$ 35,048	\$ —	\$ 35,048

The following table summarizes the allocation of the purchase consideration to the other intangible assets acquired:

	Preliminary Fair Value	Weighted Average Life (in years)
Definite-lived:		
Customer related	\$ 12,837	12
Technology	4,749	12
Indefinite-lived:		
Tradenames	2,473	—
Total	\$ 20,059	

The fair value of the intangible assets was based on third-party valuations and management's estimates, generally utilizing income and market approaches. Goodwill recognized in this transaction is primarily attributable to the Company's expected future economic benefits from the enhanced access to high-growth markets including private label opportunities through Dacheng's innovative patient temperature management devices. The goodwill is not expected to be deductible for tax purposes.

The pro forma effects of this acquisition would not materially impact the Company's reported results for any period presented, and as a result no pro forma financial statements are presented.

Acquisition of Beckmann & Egle Industrieelektronik GmbH

On July 1, 2021, the Company acquired the medical business unit of Beckmann & Egle Industrieelektronik GmbH (“B&E”), a developer and manufacturer of electronic control units, for a purchase price of \$2,827. The acquisition was accounted for as a business combination with the purchase price assigned to inventory, property and equipment and other intangible assets based on their estimated fair values as of the acquisition date. The results of operations of B&E are reported within the Company’s Medical segment from the date of acquisition.

Note 5 — Restructuring and Impairments

The Company continuously monitors market developments, industry trends and changing customer needs and in response, may undertake restructuring actions, as necessary, to execute management’s strategy, streamline operations and optimize the Company’s cost structure. Restructuring actions may include the realignment of existing manufacturing footprint, facility closures, or similar actions, either in the normal course of business or pursuant to significant restructuring programs.

These actions may result in employees receiving voluntary or involuntary employee termination benefits, which are mainly statutory requirements or other contractual agreements. Voluntary termination benefits are accrued when an employee accepts the related offer. Involuntary termination benefits are accrued upon the commitment to a termination plan and when the benefit arrangement is communicated to affected employees, or when liabilities are determined to be probable and estimable, depending on the existence of a substantive plan for severance or termination.

Manufacturing Footprint Rationalization

During 2019, the Company committed to a restructuring plan (“Plan”) to improve the Company’s manufacturing productivity and rationalize its footprint. Under this Plan, the Company relocated and consolidated certain automotive electronics manufacturing plants in North America and China.

During the year ended December 31, 2022, the Company recognized restructuring expense of \$56 for employee separation costs and \$198 for other costs, primarily related to equipment move and set up costs.

During the year ended December 31, 2021, the Company recognized restructuring expense of \$1,303 for employee separation costs and \$1,665 for other costs, primarily related to equipment move and set up costs.

During the year ended December 31, 2020, the Company recognized restructuring expense of \$(832) for employee separation costs and \$1,019 for other costs, primarily related to accelerated depreciation and equipment move and set up costs. The net activity for the year ended December 31, 2020 was primarily related to a reduction in the estimates of previously recognized employee separation costs.

The Company has recorded approximately \$10,359 of restructuring expenses since the inception of this program and as of December 31, 2022, \$588 remains accrued.

Other Restructuring Activities

The Company has undertaken several discrete restructuring actions. During the years ended December 31, 2022, 2021 and 2020, the Company recognized \$0, \$889 and \$5,382 of employee separation costs, respectively, and \$383, \$0 and \$234 of other related costs, respectively. These restructuring expenses were primarily associated with restructuring actions focused on the rotation of our manufacturing footprint to best cost locations and the reduction of global overhead costs.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Restructuring Expenses By Reporting Segment

Restructuring expense by reporting segment for the years ended December 31, 2022, 2021 and 2020 was as follows:

	Year Ended December 31,		
	2022	2021	2020
Automotive	\$ 637	\$ 2,793	\$ 5,075
Medical	—	—	112
Corporate	—	1,064	616
Total	<u>\$ 637</u>	<u>\$ 3,857</u>	<u>\$ 5,803</u>

Restructuring Liability

The following table summarizes restructuring activity for all restructuring initiatives for the years ended December 31, 2022 and 2021:

	Employee Separation Costs	Other Related Costs	Total
Balance at December 31, 2020	\$ 5,627	\$ —	\$ 5,627
Additions, charged to restructuring expenses	2,406	1,927	4,333
Change in estimate	(214)	(262)	(476)
Cash payments	(6,129)	(1,709)	(7,838)
Non-cash utilization	—	(218)	(218)
Currency translation and other	(196)	262	66
Balance at December 31, 2021	<u>\$ 1,494</u>	<u>\$ —</u>	<u>\$ 1,494</u>
Additions, charged to restructuring expenses	6	581	587
Change in estimate	50	—	50
Cash payments	(881)	(581)	(1,462)
Currency translation and other	(81)	—	(81)
Balance at December 31, 2022	<u>\$ 588</u>	<u>\$ —</u>	<u>\$ 588</u>

Impairments – Non-Automotive Electronics Business

On December 31, 2022, the Company approved a plan to exit its non-automotive electronics business to strengthen the Company's core business and focus its resources and equipment with businesses and investments that are more strategic and profitable. The Company will continue to sell certain non-automotive electronics products until the exit is complete.

The Company is evaluating a potential sale of the non-automotive electronics business or substantially all of its assets. If such sale is not pursued or is unsuccessful, the Company intends to wind-down the operations of the business over approximately eight to twelve months, subject to discussions with customers and suppliers. In the event of a wind-down, certain property, plant and equipment will be utilized by other operations of the Company.

During the year ended December 31, 2022, the Company recorded non-cash impairment charges of \$9,378, \$5,601 and \$690 for write downs of inventory, intangible assets and property and equipment, respectively, within the Automotive segment. Write downs of inventory are recorded in Cost of sales. Write downs of intangible assets and property and equipment are recorded in Impairment of intangible assets and property and equipment.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Note 6 — Details of Certain Financial Statement Components

	December 31,	
	2022	2021
Inventory:		
Raw materials, net of reserve	\$ 136,217	\$ 96,426
Work in process, net of reserve	17,695	9,495
Finished goods, net of reserve	64,336	53,556
Total inventory, net	<u>\$ 218,248</u>	<u>\$ 159,477</u>
Other current assets:		
Notes receivable	\$ 12,127	\$ 13,033
Income tax and other tax receivable	15,041	10,681
Billable tooling	15,267	3,778
Short-term derivative financial instruments	6,564	300
Prepaid expenses	6,239	3,407
Receivables due from factor	5,490	—
Other	3,869	1,576
Total other current assets	<u>\$ 64,597</u>	<u>\$ 32,775</u>
Property and equipment:		
Machinery and equipment	\$ 214,342	\$ 155,463
Buildings and improvements	123,714	100,788
Information technology	39,726	33,060
Production tooling	24,839	25,180
Leasehold improvements	12,271	11,445
Construction in progress	29,023	14,506
Total property and equipment	443,915	340,442
Less: accumulated depreciation	(199,435)	(185,172)
Total property and equipment, net	<u>\$ 244,480</u>	<u>\$ 155,270</u>
Other current liabilities:		
Accrued employee liabilities	\$ 32,031	\$ 28,818
Liabilities from discounts and rebates	26,640	27,343
Income tax and other taxes payable	14,459	17,068
Restructuring	588	1,494
Accrued warranty	2,380	1,916
Other	17,716	5,554
Total other current liabilities	<u>\$ 93,814</u>	<u>\$ 82,193</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Note 7 — Goodwill and Other Intangibles*Goodwill*

Changes in the carrying amount of goodwill, by reportable segment, for the years ended December 31, 2022 and 2021 were as follows:

	Automotive	Medical	Total
Balance as of December 31, 2020	\$ 39,495	\$ 28,529	\$ 68,024
Acquisition of B&E	—	976	976
Exchange rate impact	(2,166)	(801)	(2,967)
Balance as of December 31, 2021	\$ 37,329	\$ 28,704	\$ 66,033
Acquisition of Dacheng	—	19,016	19,016
Acquisition of Alfmeier	34,494	—	34,494
Exchange rate impact	1,246	(1,015)	231
Balance as of December 31, 2022	<u>\$ 73,069</u>	<u>\$ 46,705</u>	<u>\$ 119,774</u>

Other Intangible Assets

Other intangible assets and accumulated amortization balances as of December 31, 2022 and 2021 were as follows:

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Definite-lived:			
Customer relationships	\$ 112,286	\$ (65,748)	\$ 46,538
Technology	44,745	(25,709)	19,036
Product development costs	18,774	(18,456)	318
Software development	1,007	—	1,007
Indefinite-lived:			
Tradenames	7,034	—	7,034
Balance as of December 31, 2022	<u>\$ 183,846</u>	<u>\$ (109,913)</u>	<u>\$ 73,933</u>

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Definite-lived:			
Customer relationships	\$ 90,448	\$ (64,105)	\$ 26,343
Technology	29,464	(24,487)	4,977
Product development costs	20,329	(19,772)	557
Software development	1,007	—	1,007
Indefinite-lived:			
Tradenames	4,670	—	4,670
Balance as of December 31, 2021	<u>\$ 145,918</u>	<u>\$ (108,364)</u>	<u>\$ 37,554</u>

On December 31, 2022, the Company approved a plan to exit its non-automotive electronics business, resulting in an impairment of our customer relationships intangible assets of \$5,601. See Note 5, "Restructuring and Impairments," to the consolidated financial statements included in this Annual Report for additional information.

In connection with the acquisition of Alfmeier, the Company recorded technology of \$11,647 and customer relationships of \$19,812. These definite-lived assets are being amortized using the straight-line method over their estimated useful lives of approximately 9 years and 14 years, respectively.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

In connection with the acquisition of Dacheng, the Company recorded technology of \$4,749, customer relationships of \$12,837, and indefinite-lived tradenames of \$2,473. Technology and customer relationships are definite-lived assets that are being amortized using the straight-line method over their estimated useful lives of approximately 12 years for each.

In connection with the acquisition of B&E, the Company recorded technology of \$976. These definite-lived assets are being amortized using the straight-line method over their estimated useful lives of approximately seven years.

On February 28, 2020, Gentherm acquired the automotive patents and technology of a development-stage technology company for \$3,141. The investment was accounted for as an asset acquisition of defensive intangible assets and will be amortized over six years.

On June 19, 2020, Gentherm sold patents from a non-core business for \$2,055. The gain on sale of \$1,978 was recorded in Other income in the consolidated statements of income.

A total of \$9,018, \$8,821 and \$9,226 in other intangible assets were amortized in 2022, 2021 and 2020, respectively.

An estimate of other intangible asset amortization by year, is as follows:

2023	\$	8,294
2024	\$	7,297
2025	\$	7,284
2026	\$	7,284
2027	\$	7,284

Note 8 — Leases

Components of lease expense for the years ended December 31, 2022, 2021 and 2020 were as follows:

	Year Ended December 31,		
	2022	2021	2020
Lease cost:			
Operating lease cost	\$ 8,040	\$ 8,227	\$ 6,773
Amortization of ROU assets - finance leases	168	—	—
Interest on lease liabilities - finance leases	16	—	—
Short-term lease cost	1,773	1,941	1,834
Sublease income	(101)	(163)	(158)
Total lease cost	\$ 9,896	\$ 10,005	\$ 8,449

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Other information related to leases is as follows:

	Year Ended December 31,	
	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for operating leases	\$ 10,381	\$ 7,685
Operating cash flows for finance leases	16	—
Financing cash flows for finance leases	164	—
Right-of-use lease assets obtained in exchange for lease obligations:		
Operating leases	\$ 15,902	\$ 2,379
Finance leases	1,180	—

	December 31, 2022	December 31, 2021
	Weighted average remaining lease term:	
Operating leases	5.7 years	6.9 years
Finance leases	2.7 years	N/A
Weighted average discount rate:		
Operating leases	4.35%	4.53%
Finance leases	3.57%	N/A

A summary of operating leases as of December 31, 2022, under all non-cancellable operating leases with terms exceeding one year is as follows:

2023	\$ 8,074
2024	7,003
2025	4,984
2026	3,122
2027	1,631
2028 or later	6,538
Total future minimum lease payments	31,352
Less imputed interest	(3,671)
Total	\$ 27,681

A summary of finance leases as of December 31, 2022, under all non-cancellable finance leases with terms exceeding one year is as follows:

2023	\$ 432
2024	437
2025	148
2026	68
Total future minimum lease payments	\$ 1,085

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Note 9 — Debt

The following table summarizes the Company's debt as of December 31, 2022 and 2021:

	December 31,			
	2022		2021	
	Interest Rate	Principal Balance	Interest Rate	Principal Balance
Credit Agreement:				
U.S. Revolving Note (U.S. Dollar denominations)	5.80%	\$ 232,000	1.35%	\$ 35,000
Other loans	3.89% - 5.21%	2,011	5.21%	3,750
Finance leases	N/A	1,085	N/A	—
Total debt		235,096		38,750
Current maturities		(2,443)		(2,500)
Long-term debt, less current maturities		<u>\$ 232,653</u>		<u>\$ 36,250</u>

Credit Agreement

On June 10, 2022, the Company entered into a Second Amended and Restated Credit Agreement (the "Second Amended and Restated Credit Agreement") with a consortium of lenders and Bank of America, N.A. as administrative agent (the "Agent"). The Second Amended and Restated Credit Agreement amended and restated in its entirety the Amended and Restated Credit Agreement dated June 27, 2019, by and among Gentherm, certain of its direct and indirect subsidiaries, the lenders party thereto and the Agent.

The Second Amended and Restated Credit Agreement provides for a \$500,000 secured revolving credit facility (the "Revolving Credit Facility") (a \$25,000 increase from the revolving credit facility under the Amended and Restated Credit Agreement), with a \$50,000 sublimit for swing line loans and a \$15,000 sublimit for the issuance of standby letters of credit. Any amount of the facility utilized for swing line loans or letters of credit outstanding will reduce the amount available under the Second Amended and Restated Credit Agreement. The Company had no outstanding letters of credit issued as of December 31, 2022 and December 31, 2021.

Subject to specified conditions, Gentherm can increase the Revolving Credit Facility or incur secured term loans in an aggregate amount of up to \$200,000. The Second Amended and Restated Credit Agreement extended the maturity of the Revolving Credit Facility from June 27, 2024 to June 10, 2027. The outstanding principal and interest (of approximately \$35,000 as of June 10, 2022) under the Amended and Restated Credit Agreement continued and remained obligations under the Second Amended and Restated Credit Agreement.

The U.S. borrowers and guarantors participating in the Second Amended and Restated Credit Agreement also entered into a Second Amended and Restated Pledge and Security Agreement (the "Second Amended and Restated Security Agreement"). The Second Amended and Restated Security Agreement grants a security interest to the Agent in substantially all of the personal property of the Company and its U.S. subsidiaries designated as borrowers to secure their respective obligations under the Second Amended and Restated Security Agreement, including the stock and membership interests of specified subsidiaries (limited to 66% of the stock in the case of certain non-U.S. subsidiaries). In addition to the security obligations, all obligations under the Second Amended and Restated Credit Agreement (including all obligations of any U.S. or non-U.S. loan party) are unconditionally guaranteed by certain of Gentherm's domestic subsidiaries, and the German subsidiary borrowers and certain other foreign subsidiaries guarantee all obligations of the non-U.S. loan parties under the Second Amended and Restated Credit Agreement. The Second Amended and Restated Credit Agreement restricts, among other things, the amount of dividend payments the Company can make to shareholders.

The Second Amended and Restated Credit Agreement contains covenants, that, among other things, (i) prohibit or limit the ability of the borrowers and any material subsidiary to incur additional indebtedness, create liens, pay dividends, make certain types of investments (including acquisitions), enter into certain types of transactions with affiliates, prepay other indebtedness, sell assets or enter into certain other transactions outside the ordinary course of business, and (ii) require that Gentherm maintain a minimum Consolidated Interest Coverage Ratio and a maximum Consolidated Net Leverage Ratio (based on consolidated EBITDA for the applicable trailing four fiscal quarters) as of the end of any fiscal quarter. The Second Amended and Restated Credit Agreement also contains customary events of default. As of December 31, 2022, the Company was in compliance with the terms of the Second

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Amended and Restated Credit Agreement. The Second Amended and Restated Credit Agreement additionally contains customary events of default. Upon the occurrence of an event of default, the amounts outstanding under the Revolving Credit Facility may be accelerated and may become immediately due and payable.

Under the Second Amended and Restated Credit Agreement, U.S. Dollar denominated loans bear interest at either a base rate (“Base Rate Loans”) or Term SOFR rate (“Term SOFR Rate Loans”), plus a margin (“Applicable Rate”). The rate for Base Rate Loans is equal to the highest of the Federal Funds Rate plus 0.50%, Bank of America’s prime rate, or the Term SOFR rate plus 1.00%. The rate for Term SOFR Rate Loans denominated in U.S. Dollars is equal to the forward-looking Secured Overnight Financing Rate (“SOFR”) term rate administered by the CME with a term of one month. All loans denominated in a currency other than the U.S. Dollar must be Term SOFR Rate Loans. Interest is payable at least quarterly. Additionally, a commitment fee of between 0.175% to 0.300%, which will vary based on the Consolidated Net Leverage Ratio, as defined in the Second Amended and Restated Credit Agreement, is payable on the average daily unused amounts under the Revolving Credit Facility.

The Applicable Rate varies based on the Consolidated Net Leverage Ratio reported by the Company. As long as the Company is not in default of the terms and conditions of the Second Amended and Restated Credit Agreement, the lowest and highest possible Applicable Rate is 1.125% and 2.125%, respectively, for Term SOFR Rate Loans and 0.125% and 1.125%, respectively, for Base Rate Loans.

Borrowing availability is subject to, among other things, the Company’s compliance with the minimum Consolidated Interest Coverage Ratio and the maximum Consolidated Net Leverage Ratio as of the end of any fiscal quarter. Based upon consolidated EBITDA for the trailing four fiscal quarters calculated for purposes of the Consolidated Net Leverage Ratio, \$264,904 remained available as of December 31, 2022 for additional borrowings under the Second Amended and Restated Credit Agreement subject to specified conditions that Gentherm currently satisfies.

In connection with the Second Amended and Restated Credit Agreement, the Company incurred debt issuance costs of \$1,417, which have been capitalized and will be amortized into interest expense over the term of the credit facility. In addition, unamortized deferred debt issuance costs of \$144 were written-off and recognized in Interest expense, net during the twelve months ended December 31, 2022.

The scheduled principal maturities of our debt as of December 31, 2022 were as follows:

	U.S. Revolving Note	Other Debt	Total
2023	\$ —	\$ 2,443	\$ 2,443
2024	—	437	437
2025	—	148	148
2026	—	68	68
2027	232,000	—	232,000
Total	<u>\$ 232,000</u>	<u>\$ 3,096</u>	<u>\$ 235,096</u>

Note 10 — Pension and Other Post Retirement Benefit Plans

The Company maintains a U.S. defined benefit pension plan covering its former Chief Executive Officer (“U.S. Plan”) and a German defined benefit pension plan covering certain retired executive employees of the Company’s wholly owned subsidiary, Gentherm GmbH (“German Plan”).

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The components of net periodic benefit cost for the Company's defined benefit plans for the years ended December 31, 2022, 2021 and 2020 were as follows:

	U.S. Plan			German Plan		
	Year Ended December 31,			Year Ended December 31,		
	2022	2021	2020	2022	2021	2020
Net periodic benefit cost:						
Service cost	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Interest cost	56	42	85	92	91	88
Expected return on plan assets	—	—	—	(109)	(120)	(121)
Amortization of prior service cost and actuarial loss	22	26	7	114	133	124
Net periodic benefit cost	<u>\$ 78</u>	<u>\$ 68</u>	<u>\$ 92</u>	<u>\$ 97</u>	<u>\$ 104</u>	<u>\$ 91</u>
Assumptions:						
Discount rate	1.80 %	1.20 %	2.40 %	1.25 %	1.08 %	1.06 %
Long-term return on assets	N/A	N/A	N/A	2.90 %	2.90 %	3.10 %

A reconciliation of the change in benefit obligation and the change in plan assets for the years ended December 31, 2022 and 2021 is as follows:

	U.S. Plan		German Plan	
	As of December 31,		As of December 31,	
	2022	2021	2022	2021
Change in projected benefit obligation:				
Balance at beginning of year	\$ 3,446	\$ 3,847	\$ 8,102	\$ 8,934
Interest cost	56	42	92	91
Paid pension distributions	(342)	(342)	(281)	(310)
Actuarial (gain) loss	(349)	(101)	(2,001)	9
Exchange rate impact	—	—	(514)	(622)
Balance at end of year	<u>\$ 2,811</u>	<u>\$ 3,446</u>	<u>\$ 5,398</u>	<u>\$ 8,102</u>
Change in plan assets:				
Balance at beginning of year	—	—	4,069	4,276
Actual return on plan assets	—	—	89	98
Contributions	—	—	—	310
Paid pension distributions	—	—	—	(310)
Exchange rate impact	—	—	(240)	(305)
Balance at end of year	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 3,918</u>	<u>\$ 4,069</u>
Underfunded Status	<u>\$ (2,811)</u>	<u>\$ (3,446)</u>	<u>\$ (1,480)</u>	<u>\$ (4,033)</u>
Balance sheet classification:				
Other current liabilities	\$ (342)	\$ (342)	\$ (314)	\$ (306)
Pension benefit obligation	(2,469)	(3,104)	(1,166)	(3,727)
Accumulated other comprehensive loss (pre-tax):				
Actuarial losses	205	575	965	3,288
Assumptions:				
Discount rate	4.65 %	1.80 %	4.10 %	1.25 %

Pre-tax amounts included in AOCI that are expected to be recognized in net periodic benefit cost during the year ended December 31, 2023 are as follows:

	U.S Plan	German Plan
Actuarial losses	\$ -	\$ 22

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(In thousands, except share and per share data)

The accumulated benefit obligations were as follows:

	U.S. Plan		German Plan	
	As of December 31,		As of December 31,	
	2022	2021	2022	2021
Accumulated benefit obligation	\$ 2,811	\$ 3,446	\$ 5,398	\$ 8,102

Interest costs are recognized in Selling, general and administrative expenses in the consolidated statements of income and actuarial gains and losses are included in the consolidated balance sheet as part of Accumulated other comprehensive loss within shareholders' equity. Actuarial gains or losses are amortized to Selling, general and administrative expense in the consolidated statements of income based on the average future life of the Plan using the corridor method. Prior service cost is included in Selling, general and administrative expenses in the consolidated statements of income.

Plan assets – German Plan

Plan assets are comprised of Gentherm GmbH's pension insurance policies and are pledged to the beneficiaries of the German Plan. A market valuation technique, based on observable underlying insurance charges, is used to determine the fair value of the pension plan assets (Level 2).

The expected return on plan assets assumption used to calculate Gentherm GmbH's pension benefit obligation was determined using actual returns realized on plan assets in the prior year.

Contributions

We do not expect contributions to be paid to the U.S. Plan or the German Plan during the next fiscal year.

The schedule of future expected pension payments is as follows:

Year	Projected Pension Benefit Payments	
	U.S. Plan	German Plan
2023	\$ 342	\$ 311
2024	342	303
2025	342	294
2026	342	285
2027	342	274
2028-2031	1,710	2,732
Total	\$ 3,420	\$ 4,199

Defined contribution plans

The Company also sponsors defined contribution plans for eligible employees. On a discretionary basis, the Company matches a portion of the employee contributions and or makes additional discretionary contributions. Gentherm recognized costs of \$1,984, \$1,724 and \$1,275 related to contributions to its defined contribution plans during the years ended December 31, 2022, 2021 and 2020, respectively.

Note 11 — Commitments and Contingencies

Legal and other contingencies

The Company may be subject to various legal actions and claims in the ordinary course of its business, including those arising out of breach of contracts, intellectual property rights, environmental matters, regulatory matters and employment-related matters. The Company establishes accruals for matters which it believes that losses are probable and can be reasonably estimated. Although it is not possible to predict with certainty the outcome of these matters, the Company is of the opinion that the ultimate resolution of these

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

matters will not have a material adverse effect on its consolidated results of operations or financial position. Product liability and warranty reserves are recorded separately from legal reserves.

Product Liability and Warranty Matters

In the event that the Company's products fail to perform as expected or result in alleged bodily injury or property damage, our products may subject us to warranty claims and product liability. If any of our products are or are alleged to be defective, we may be required to participate in a recall or other corrective action involving such products. The Company maintains liability insurance coverage at levels based on commercial norms and historical claims experience. The Company can provide no assurances that it will not experience material claims in the future or that it will not incur significant costs to defend such claims.

The Company accrues warranty obligations for products sold based on management estimates of future failure rates and current claim cost experience, with support from the sales, engineering, quality and legal functions. Using historical information available to the Company, including claims already filed by customers, the warranty accrual is adjusted quarterly to reflect management's best estimate of future claims.

The following is a reconciliation of the changes in accrued warranty costs:

	Year Ended December 31,	
	2022	2021
Balance at beginning of year	\$ 1,916	\$ 2,391
Warranty opening balance from acquired entities	907	-
Warranty claims paid	(1,841)	(2,164)
Warranty expense for products shipped during the current period	1,584	1,813
Adjustments to warranty estimates from prior periods	(274)	(73)
Adjustments due to currency translation	88	(51)
Balance at end of year	<u>\$ 2,380</u>	<u>\$ 1,916</u>

Other matters

Purchase commitments for materials, supplies, services and capital expenditures, as part of the normal course of business, are generally consistent from year to year. Commitments for capital expenditures as of December 31, 2022 were \$6,853. In addition, due to supply shortages of semiconductors, the Company has entered into agreements with various suppliers to reserve the right to purchase certain semiconductor chips over rolling periods of 12-24 months, with volume commitments determined based on our anticipated production requirements. As of December 31, 2022, the Company's total commitments for these semiconductor chip agreements was \$40,130. Such agreements provide the Company with priority access to semiconductor chips as they become available, however, these agreements do not guarantee that our suppliers will meet the timing and quantities requested by Gentherm. All other purchase commitments as of December 31, 2022 were immaterial.

Employees

Approximately 31% of the Company's workforce are members of industrial trade unions and are employed under the terms of various labor agreements. In 2023, certain agreements will require a vote on the terms of their respective labor contracts. Management does not anticipate any significant difficulties with respect to the renewal of these agreements.

Note 12 — Earnings Per Share

Basic earnings per share are computed by dividing net income by the weighted average number of shares of Common Stock outstanding during the period. The Company's diluted earnings per share give effect to all potential shares of Common Stock outstanding during a period that do not have an anti-dilutive impact to the calculation. In computing the diluted earnings per share, the treasury stock method is used in determining the number of shares assumed to be issued from the exercise of Common Stock equivalents.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The following table illustrates earnings per share and the weighted average shares outstanding used in calculating basic and diluted earnings per share:

	Year Ended December 31,		
	2022	2021	2020
Net income	\$ 24,441	\$ 93,434	\$ 59,690
Basic weighted average shares of Common Stock outstanding	33,126,202	33,085,732	32,666,025
Dilutive effect of stock options, restricted stock awards and restricted stock units	376,952	423,988	362,079
Diluted weighted average shares of Common Stock outstanding	33,503,154	33,509,720	33,028,104
Basic earnings per share	\$ 0.74	\$ 2.82	\$ 1.83
Diluted earnings per share	\$ 0.73	\$ 2.79	\$ 1.81

The following table represents Common Stock issuable upon the exercise of certain stock options that have been excluded from the diluted earnings calculation because the effect of their inclusion would be anti-dilutive.

	Year Ended December 31,		
	2022	2021	2020
Anti-dilutive securities share impact	—	—	12,000

See Note 17 for information about the Company's different equity incentive plans.

Note 13 — Financial Instruments

Derivative Financial Instruments

The Company is exposed to various market risks including, but not limited to, changes in foreign currency exchange rates, changes in interest rates and price fluctuations of certain material commodities such as copper. Market risks for changes in interest rates relate primarily to its debt obligations under the Second Amended and Restated Credit Agreement. Foreign currency exchange risks are attributable to sales to foreign customers and purchases from foreign suppliers not denominated in a location's functional currency, foreign plant operations, intercompany indebtedness, intercompany investments and include exposures to the Euro, Mexican Peso, Canadian Dollar, Hungarian Forint, North Macedonian Denar, Ukrainian Hryvnia, Japanese Yen, Chinese Renminbi, Korean Won, Czech Koruna and Vietnamese Dong.

The Company regularly enters into derivative contracts with the objective of managing its financial and operational exposure arising from these risks by offsetting gains and losses on the underlying exposures with gains and losses on the financial instruments used to hedge them. The decision of whether and when to execute derivative financial instruments, along with the duration of the instrument, may vary from period to period depending on market conditions, the relative costs of the instruments and capacity to hedge. The duration is linked to the timing of the underlying exposure, with the connection between the two being regularly monitored. The Company does not enter into derivative financial instruments for speculative or trading purposes. Some derivative contracts do not qualify for hedge accounting; for other derivative contracts, we elect to not apply hedge accounting.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The Company's designated hedging relationships are formally documented at the inception of the hedge, and hedges must be highly effective in offsetting changes to future cash flows on hedged transactions both at the inception of a hedge and on an ongoing basis to be designated for hedge accounting treatment. For derivative contracts which can be classified as a cash flow hedge, the effective portion of the change in the fair value of the derivative is recorded to AOCI in the consolidated balance sheets. When the underlying hedge transaction is realized, the gain or loss included in Accumulated other comprehensive loss is recorded in earnings in the consolidated statements of income on the same line as the gain or loss on the hedged item attributable to the hedged risk. The Company records the ineffective portion of foreign currency and copper commodity hedging instruments, if any, to cost of sales, in the consolidated statements of income. Cash flows associated with derivatives are reported in net cash provided by operating activities in the Company's Consolidated Statements of Cash Flows.

The Company uses an income approach to value derivative instruments, analyzing quoted market prices to calculate the forward values and then discounting such forward values to the present value using benchmark rates at commonly quoted intervals for the instrument's full term.

In the second quarter of 2022, the Company entered into a floating-to-fixed interest rate swap agreement with a notional amount of \$100,000. This interest rate swap is an undesignated hedge of the Company's exposure to interest payment fluctuations on a portion of the Credit Facility borrowings that were drawn for the acquisitions of Alfmeier and Dacheng. The periodic changes in fair value are recognized in Interest expense, net.

In the second and third quarter of 2022, the Company entered into forward contracts with a notional amount of \$128,319 to hedge the foreign currency risk associated with the forecasted purchase of Alfmeier. These contracts matured and were settled in the third quarter of 2022. During the year ended December 31, 2022 the Company recognized expense of \$3,806 in Foreign currency (loss) gain within the consolidated income statement.

Information related to the recurring fair value measurement of derivative financial instruments in the consolidated balance sheet as of December 31, 2022 is as follows:

	Fair Value Hierarchy	Notional Amount	Asset Derivatives		Liability Derivatives		Net Asset/ (Liabilities)
			Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value	
Derivatives Designated as Cash Flow Hedges							
Foreign currency derivatives	Level 2	\$ 40,063	Other current assets	\$ 3,791	Other current liabilities	\$ —	\$ 3,791
Derivatives Not Designated as Hedging Instruments							
Interest rate contracts	Level 2	\$ 100,000	Other current assets	\$ 2,772	Other current liabilities	\$ —	\$ 2,772

Information related to the recurring fair value measurement of derivative financial instruments in the consolidated balance sheet as of December 31, 2021 is as follows:

	Fair Value Hierarchy	Notional Amount	Asset Derivatives		Liability Derivatives		Net Asset/ (Liabilities)
			Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value	
Derivatives Designated as Cash Flow Hedges							
Foreign currency derivatives	Level 2	\$ 13,974	Other current assets	\$ 294	Other current liabilities	\$ —	\$ 294
Commodity hedges	Level 2	\$ 309	Other current assets	\$ 6	Other current liabilities	\$ —	\$ 6

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Information related to the effect of derivative instruments in the consolidated statements of income is as follows:

	Location	Year Ended December 31,		
		2022	2021	2020
Derivatives Designated as Cash Flow Hedges				
Foreign currency derivatives	Cost of sales – income	\$ 1,458	\$ 1,609	\$ (1,629)
	Other comprehensive (loss) income	3,496	(1,217)	272
	Foreign currency loss	—	—	(118)
Total foreign currency derivatives		<u>\$ 4,954</u>	<u>\$ 392</u>	<u>\$ (1,475)</u>
Commodity derivatives	Cost of sales – income	\$ 19	\$ 14	\$ —
	Other comprehensive (loss) income	(6)	6	—
	Total commodity derivatives	<u>\$ 13</u>	<u>\$ 20</u>	<u>\$ —</u>
Derivatives Not Designated as Hedging Instruments				
Foreign currency derivatives	Foreign currency (loss) gain	\$ (3,806)	\$ -	\$ -
Total foreign currency derivatives		<u>\$ (3,806)</u>	<u>\$ -</u>	<u>\$ -</u>
Interest rate contracts	Interest income (expense), net	\$ 2,772	\$ -	\$ -
Total interest rate derivatives		<u>\$ 2,772</u>	<u>\$ -</u>	<u>\$ -</u>

The Company did not incur any hedge ineffectiveness during the years ended December 31, 2022 and 2021.

Accounts Receivable Factoring

The Company sells certain customer trade receivables under factoring arrangements with designated financial institutions. All current factoring arrangements were assumed through the acquisition of Alfmeier. Beginning January 1, 2023, our North American factoring agreement is not active and the parties are currently undergoing negotiations in the ordinary course of business. Certain transactions occur under non-recourse agreements and are accounted for as sales, and the cash proceeds are included in cash provided by operating activities. The remaining transactions occur under deferred purchase agreements, in which a portion of the purchase price for the receivables is paid by the bank purchasers to the Company in cash upon sale. The remaining portion is recorded as a deferred purchase receivable, which is paid to the Company as payments on the receivables that are collected by the financial institution from account debtors. Cash proceeds received upon the sale of the receivables to the financial institution are included in cash provided by operating activities and the cash proceeds received on the deferred purchase receivables are included in cash provided by investing activities. All factoring arrangements incorporate customary representations, including representations as to validity of amounts due, completeness of performance obligations and absence of commercial disputes.

During the year ended December 31, 2022, we sold trade receivables totaling \$61,482 and incurred factoring fees of \$180. As of December 31, 2022, receivables of \$19,108 had been factored and had not yet been paid by customers to the respective financial institutions and our availability under the receivables factoring agreements was \$5,479. The collective limit under our factoring arrangements as of December 31, 2022 was \$24,142.

Note 14 — Fair Value Measurement

Fair value is defined as the exchange price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurements are based on one or more of the following three valuation techniques:

Market: This approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

Income: This approach uses valuation techniques to convert future amounts to a single present value amount based on current market expectations.

Cost: This approach is based on the amount that would be required to replace the service capacity of an asset (replacement cost).

The Company uses the following fair value hierarchy to measure fair value into three broad levels, which are described below:

Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Inputs, other than quoted market prices included in Level 1, that are observable either directly or indirectly for the asset or liability.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

Items Measured at Fair Value on a Recurring Basis

Except for derivative financial instruments (see Note 13) and pension plan assets (see Note 10), the Company has no material financial assets and liabilities that are carried at fair value at December 31, 2022 and 2021. In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible and also considers counterparty credit risk in its assessment of fair value.

Items Measured at Fair Value on a Nonrecurring Basis

The Company measures certain assets and liabilities at fair value on a non-recurring basis. As these nonrecurring fair value measurements are generally determined using unobservable inputs, these fair value measurements are classified within Level 3 of the fair value hierarchy. On July 1, 2021 the Company acquired B&E for \$2,827. The purchase price was allocated to inventory (Level 2), property and equipment (Level 2) and other intangible assets (Level 3) based on their estimated fair values as of the acquisition date. The Company utilized a third-party to assist in the Level 3 fair value estimates of other intangible assets for recent acquisitions (see Note 4). The estimated fair values of these assets were based on third-party valuations and management's estimates, generally utilizing income and market approaches. As of December 31, 2022, and December 31, 2021, there were no other significant assets or liabilities measured at fair value on a non-recurring basis.

Items Not Carried at Fair Value

The Company uses an income valuation technique to measure the fair values of its debt instruments by converting amounts of future cash flows to a single present value amount using rates based on current market expectations (Level 2 inputs). As of December 31, 2022, and 2021, the carrying values of the indebtedness under the Company's Credit Agreement were not materially different than their estimated fair values because the interest rates on variable rate debt approximated rates currently available to the Company (see Note 9).

Note 15 — Equity*Common Stock*

The Company is authorized to issue up to 59,991,000 shares, of which 55,000,000 shares shall be common stock, without par value, and 4,991,000 shall be Preferred Stock, without par value. As of December 31, 2022, an aggregate of 33,202,082 shares of its common stock were issued and outstanding. As of December 31, 2022, there are no preferred stock shares issued or outstanding. The Company's common stock is listed on the Nasdaq Global Select Market under the symbol, "THRM", and has the following rights and privileges:

- *Voting rights.* All shares of the Company's common stock have identical rights and privileges. With limited exceptions, holders of common stock are entitled to one vote for each outstanding share of common stock held of record by each shareholder on all matters properly submitted for the vote of the Company's shareholders.
- *Dividend rights.* Subject to applicable law, any contractual restrictions and the rights of the holders of outstanding preferred stock, if any, holders of common stock are entitled to receive ratably such dividends and other distributions that the Company's Board of Directors, in its discretion, declares from time to time.
- *Liquidation rights.* Upon the dissolution, liquidation or winding up of the Company, subject to the rights of the holders of outstanding preferred stock, if any, holders of common stock are entitled to receive ratably the assets of the Company available for distribution to the Company's shareholders in proportion to the number of shares of common stock held by each shareholder.
- *Conversion, Redemption and Preemptive Rights.* Holders of common stock have no conversion, redemption, sinking fund, preemptive, subscription or similar rights.

Stock Repurchase Program

In December 2020, the Board of Directors of Gentherm Incorporated ("Board of Directors") authorized a stock repurchase program (the "2020 Stock Repurchase Program") to commence upon expiration of the prior stock repurchase program on December 15, 2020. Under the 2020 Stock Repurchase Program, the Company is authorized to repurchase up to \$150,000 of its issued and outstanding common stock over a three-year period, expiring December 15, 2023.

Repurchases may be made, from time to time, in amounts and at prices the Company deems appropriate, subject to market conditions, applicable legal requirements, debt covenants and other considerations. Any such repurchases may be executed using open market purchases, privately negotiated agreements or other transactions. Repurchases may be funded from cash on hand, available borrowings or proceeds from potential debt or other capital markets sources. During the year ended December 31, 2022, the Company did not make any repurchases under the 2020 Stock Repurchase Program. The 2020 Stock Repurchase Program had \$130,000 repurchase authorization remaining as of December 31, 2022.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Note 16 – Reclassifications Out of Accumulated Other Comprehensive Income (Loss)

Reclassification adjustments and other activities impacting accumulated other comprehensive income (loss) during the years ended December 31, 2022, 2021 and 2020 are as follows:

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Commodity Hedge Derivatives	Foreign Currency Hedge Derivatives	Total
Balance at December 31, 2021	\$ (2,893)	\$ (34,188)	\$ 5	\$ 154	\$ (36,922)
Other comprehensive income (loss) before reclassifications	2,341	(13,786)	13	4,954	(6,478)
Income tax effect of other comprehensive income (loss) before reclassifications	(621)	(295)	(3)	(1,092)	(2,011)
Amounts reclassified from accumulated other comprehensive loss into net income	137	—	(19) a	(1,458) a	(1,340)
Income taxes reclassified into net income	(31)	—	4	289	262
Net current period other comprehensive income (loss)	1,826	(14,081)	(5)	2,693	(9,567)
Balance at December 31, 2022	\$ (1,067)	\$ (48,269)	\$ —	\$ 2,847	\$ (46,489)

(a) The amounts reclassified from Accumulated other comprehensive income (loss) are included in Cost of sales. See Note 13 for information related to the effect of commodity and foreign currency derivative instruments on our consolidated statements of income.

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Commodity Hedge Derivatives	Foreign Currency Hedge Derivatives	Total
Balance at December 31, 2020	\$ (3,451)	\$ (12,637)	\$ —	\$ 1,106	\$ (14,982)
Other comprehensive income (loss) before reclassifications	512	(21,274)	20	392	(20,350)
Income tax effect of other comprehensive income (loss) before reclassifications	(71)	(277)	(4)	(85)	(437)
Amounts reclassified from accumulated other comprehensive loss into net income	159	—	(14) a	(1,609) a	(1,464)
Income taxes reclassified into net income	(42)	—	3	350	311
Net current period other comprehensive income (loss)	558	(21,551)	5	(952)	(21,940)
Balance at December 31, 2021	\$ (2,893)	\$ (34,188)	\$ 5	\$ 154	\$ (36,922)

(a) The amounts reclassified from Accumulated other comprehensive income (loss) are included in Cost of sales. See Note 13 for information related to the effect of commodity and foreign currency derivative instruments on our consolidated statements of income.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Commodity Hedge Derivatives	Foreign Currency Hedge Derivatives	Total
Balance at December 31, 2019	\$ (3,371)	\$ (39,879)	\$ —	\$ 895	\$ (42,355)
Other comprehensive (loss) income before reclassifications	(328)	27,147	—	(1,751)	25,068
Income tax effect of other comprehensive (loss) income before reclassifications	117	95	—	381	593
Amounts reclassified from accumulated other comprehensive loss into net income	\$ 131	—	—	2,023 ^a	2,154
Income taxes reclassified into net income	—	—	—	(442)	(442)
Net current period other comprehensive (loss) income	(80)	27,242	—	211	27,373
Balance at December 31, 2020	<u>\$ (3,451)</u>	<u>\$ (12,637)</u>	<u>\$ —</u>	<u>\$ 1,106</u>	<u>\$ (14,982)</u>

(a) The amounts reclassified from Accumulated other comprehensive income (loss) are included in Cost of sales. See Note 13 for information related to the effect of commodity and foreign currency derivative instruments on our consolidated statements of income.

The Company expects all of the existing gains and losses related to foreign currency derivatives reported in Accumulated other comprehensive loss as of December 31, 2022 to be reclassified into earnings during the next twelve months. See Note 13 for additional information about derivative financial instruments and the effects from reclassification to net income.

Note 17 — Accounting for Stock Based Compensation

On May 16, 2013, the Compensation Committee of the Company's Board of Directors (the "Board") approved the Gentherm Incorporated 2013 Equity Incentive Plan (the "2013 Plan"), covering 3,500,000 shares of our Common Stock. The 2013 Plan was amended on May 19, 2017 to increase the number of available shares by 2,000,000 and further amended on May 21, 2020 to increase the number of available shares by 2,450,000. The 2013 Plan permits the granting of various awards including stock options (including both nonqualified options and incentive options), stock appreciation rights ("SARs"), restricted stock and restricted stock units ("RSUs"), performance-based restricted stock units ("PSUs") shares and certain other awards to employees, outside directors and consultants and advisors of the Company. As of December 31, 2022, the Company had an aggregate of 2,216,324 shares of Common Stock available to issue under the 2013 Plan. All equity plans are administered by the Compensation and Talent Management Committee of the Board.

During the three-year period ended December 31, 2022, the Company has outstanding stock options, SARs, restricted stock awards and restricted stock units to employees, directors and consultants. These awards become available to the recipient upon the satisfaction of a vesting condition, either based on a period of service or based on the performance of a specific achievement. For equity-based awards with a service condition, the requisite service period typically ranges between three to four years for employees and consultants and one year for directors. As of December 31, 2022, there were 320,449 PSUs outstanding. These awards cliff vest after three-years based on the Company's achievement of either a target return on invested capital ratio ("ROIC"), as defined in the award agreement, for a specified fiscal year a target three year cumulative Adjusted EBITDA ("Adjusted EBITDA"), as defined in the award agreement, or the Company's relative total shareholder return ("TSR"), as defined in the award agreement, during a specific three-year measurement period. In each case, awards will be earned at 50% of the target number of shares for achieving a minimum threshold or up to 200% of the target number of shares for exceeding the target, with a linear adjustment between threshold and target or between target and stretch performance goals. All other outstanding, unvested equity-based awards were service based. Equity-based award vesting may be accelerated at the discretion of the Board under conditions specified in the 2013 Plan.

Under FASB ASC Topic 718, the provisions of the PSUs that vest upon the achievement of relative TSR are considered a market condition, and therefore the effect of that market condition is reflected in the grant date fair value for this portion award. A

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

third party was engaged to complete a Monte Carlo simulation to account for the market condition. That simulation takes into account the beginning stock price of our common stock, the expected volatilities for the relative TSR comparator group, the expected volatilities for the Company's stock price, correlation coefficients, the expected risk-free rate of return and the expected dividend yield of the Company and the comparator group. The single grant-date fair value computed by this valuation method is recognized by the Company in accounting for the awards regardless of the actual future outcome of the relative TSR feature. The grant date fair value of the other PSUs and RSUs are calculated as the closing price of our common stock as quoted on Nasdaq on the grant date multiplied by the number of shares subject to the award. Each of ROIC and Adjusted EBITDA is considered a performance condition and the grant-date fair value for ROIC PSUs and Adjusted EBITDA PSUs corresponds with management's expectation of the probable outcome of the performance condition as of the grant date.

The total recognized and unrecognized stock-based compensation expense is as follows:

Stock-Based Compensation Expense	2022	2021	2020	Unrecognized Stock-Based Compensation Expense at December 31, 2022	Remaining Weighted Average Vesting Period
RSUs	\$ 5,551	\$ 4,594	\$ 3,137	\$ 8,724	1.80
PSUs	954	5,535	3,361	6,745	1.97
Restricted Shares	888	1,198	1,495	419	0.42
SARs	(794)	2,721	5,494	-	-
Stock options	-	482	836	-	-
Total Stock-Based Compensation	<u>\$ 6,599</u>	<u>\$ 14,530</u>	<u>\$ 14,323</u>	<u>\$ 15,888</u>	<u>1.84</u>

The related deferred tax (expense) benefit for the years ended December 31, 2022, 2021 and 2020 was \$(444), \$2,725, and \$3,002, respectively. If Gentherm were to realize expired share-based payment arrangements, they would be reported as a forfeit in the activity roll forward tables below.

RSUs

The following table summarizes restricted stock unit activity during the years ended December 31, 2022, 2021 and 2020:

Unvested Restricted Stock Units	Time Vesting Shares	Weighted-Average Grant Date Fair Value
Outstanding at December 31, 2019	141,741	\$ 42.16
Granted	132,864	34.41
Vested	(50,953)	42.13
Forfeited	(14,747)	39.16
Outstanding at December 31, 2020	208,905	\$ 37.26
Granted	93,539	79.79
Vested	(88,296)	38.49
Forfeited	(20,522)	48.76
Outstanding at December 31, 2021	193,626	\$ 56.02
Granted	117,507	66.86
Vested	(95,692)	49.85
Forfeited	(13,863)	70.52
Outstanding at December 31, 2022	<u>201,578</u>	<u>\$ 64.27</u>

The total intrinsic value of restricted stock units vested during the years ended December 31, 2022, 2021 and 2020 was \$4,774, \$3,398 and \$2,214, respectively.

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PSUs

The following table summarizes performance stock unit activity during the years ended December 31, 2022, 2021 and 2020:

Unvested Performance Stock Units	Relative TSR Target Shares	Weighted- Average Grant Date Fair Value	ROIC Target Shares	Weighted- Average Grant Date Fair Value	Adjusted EBITDA Target Shares	Weighted- Average Grant Date Fair Value	Total
Outstanding at December 31, 2019	95,041	\$ 61.77	95,039	\$ 42.78	—	\$ —	190,080
Granted	77,967	49.25	77,967	33.72	—	—	155,934
Vested	—	—	—	—	—	—	—
Forfeited	(15,090)	56.84	(15,090)	39.96	—	—	(30,180)
Outstanding at December 31, 2020	157,918	\$ 56.06	157,916	\$ 38.58	—	\$ —	315,834
Granted	20,626	118.08	40,580	78.98	39,930	79.49	101,136
Performance Adjustment	30,828	69.18	(30,830)	44.92	—	—	(2)
Vested	(61,656)	69.18	—	—	—	—	(61,656)
Forfeited	(16,148)	61.10	(17,374)	44.32	(2,454)	79.49	(35,976)
Outstanding at December 31, 2021	131,568	\$ 62.09	150,292	\$ 47.52	37,476	\$ 79.49	319,336
Granted	21,324	103.31	42,640	68.63	42,640	68.63	106,604
Performance Adjustment	45,004	57.46	(2,258)	41.61	—	—	42,746
Vested	(90,371)	57.46	(43,106)	41.61	—	—	(133,477)
Forfeited	(4,724)	68.67	(6,493)	56.87	(3,543)	75.10	(14,760)
Outstanding at December 31, 2022	102,801	\$ 65.20	141,075	\$ 55.18	76,573	\$ 73.66	320,449

The total intrinsic value of performance stock units vested during the years ended December 31, 2022, 2021 and 2020 was \$6,986, \$4,265 and \$0, respectively.

Restricted Shares

The following table summarizes restricted stock activity during the years ended December 31, 2022, 2021 and 2020:

Unvested Restricted Shares	Shares	Weighted-Average Grant Date Fair Value
Outstanding at December 31, 2019	34,920	\$ 38.31
Granted	32,406	39.96
Vested	(32,420)	38.33
Forfeited	—	—
Outstanding at December 31, 2020	34,906	\$ 39.82
Granted	13,742	70.18
Vested	(37,272)	41.70
Forfeited	—	—
Outstanding at December 31, 2021	11,376	\$ 70.33
Granted	13,600	73.54
Vested	(11,376)	70.33
Forfeited	—	—
Outstanding at December 31, 2022	13,600	\$ 73.54

The compensation cost associated with restricted shares is estimated on the date of grant using quoted market prices (Level 1 input). The total fair value of restricted shares vested in 2022, 2021 and 2020 was \$800, \$1,554 and \$1,499, respectively.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

SARs

The following table summarizes SARs activity during the years ended December 31, 2022, 2021 and 2020:

Stock Appreciation Rights	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2019	554,250	\$ 39.41	2.84	\$ 2,981
Granted	—	—		
Exercised	(342,150)	38.22		
Forfeited	(40,500)	44.39		
Outstanding at December 31, 2020	171,600	\$ 40.60	2.44	\$ 4,224
Granted	—	—		
Exercised	(116,000)	40.34		
Forfeited	—	—		
Outstanding at December 31, 2021	55,600	\$ 41.15	1.28	\$ 2,544
Granted	—	—		
Exercised	(40,850)	42.27		
Forfeited	—	—		
Outstanding at December 31, 2022	14,750	\$ 38.05	1.15	\$ 402
Exercisable at December 31, 2022	14,750	\$ 38.05	1.15	\$ 402

There have been no SARs granted since the year ended December 31, 2017 and all SARs are currently vested. The total intrinsic value of SARs exercised during the years ended December 31, 2022, 2021 and 2020 was \$1,348, \$4,301 and \$4,164, respectively.

Stock Options

The following table summarizes stock option activity during the years ended December 31, 2022, 2021 and 2020:

Options	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2019	869,000	\$ 37.87	3.51	\$ 5,172
Granted	—	—		
Exercised	(434,250)	38.12		
Forfeited	(6,750)	38.05		
Outstanding at December 31, 2020	428,000	\$ 37.61	3.20	\$ 11,815
Granted	—	—		
Exercised	(215,250)	38.46		
Forfeited	(6,000)	38.05		
Outstanding at December 31, 2021	206,750	\$ 36.72	2.60	\$ 10,375
Granted	—	—		
Exercised	(44,116)	37.87		
Forfeited	-	-		
Outstanding at December 31, 2022	162,634	\$ 36.41	2.68	\$ 8,212
Exercisable at December 31, 2022	162,634	\$ 36.41	2.68	\$ 8,212

There have been no stock options granted since the year ended December 31, 2017 and all stock options are currently vested. The total intrinsic value of stock options exercised during the years ended December 31, 2022, 2021 and 2020 was \$1,582, \$8,269 and \$5,317, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

Note 18 — Income Taxes

The income tax provisions were calculated based upon the following components of earnings before income tax for the years ended December 31, 2022, 2021 and 2020:

	Year Ended December 31,		
	2022	2021	2020
Earnings before income tax:			
Domestic	\$ (34,211)	\$ (4,547)	\$ (11,374)
Foreign	72,593	118,399	92,930
Earnings before income tax	<u>\$ 38,382</u>	<u>\$ 113,852</u>	<u>\$ 81,556</u>

The components of the provision for income taxes for the years ended December 31, 2022, 2021 and 2020 are summarized as follows:

	Year Ended December 31,		
	2022	2021	2020
Current income tax expense:			
Federal	\$ 3,006	\$ 1,944	\$ 784
State and local	650	234	83
Foreign	17,607	18,390	20,150
Total current income tax expense	<u>\$ 21,263</u>	<u>20,568</u>	<u>21,017</u>
Deferred income tax (benefit) expense:			
Federal	(5,971)	(4,400)	(2,302)
State and local	(213)	(91)	32
Foreign	(1,138)	4,341	3,119
Total deferred (benefit) income tax expense	<u>(7,322)</u>	<u>(150)</u>	<u>849</u>
Total income tax expense	<u>\$ 13,941</u>	<u>\$ 20,418</u>	<u>\$ 21,866</u>

As of December 31, 2022, deferred U.S. income taxes have not been provided on the undistributed earnings of the Company's foreign subsidiaries since these earnings will not be taxable upon repatriation to the United States. These earnings will be primarily treated as previously taxed income from either the one-time transition tax or global intangible low-taxed income ("GILTI") provision, or they will be offset with a 100% dividend received deduction. However, the Company continues to provide a deferred tax liability for foreign income and withholding tax that will be incurred with respect to the undistributed foreign earnings that are not indefinitely reinvested.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The deferred tax assets and deferred tax liabilities and related valuation allowance were comprised of the following as of December 31, 2022 and 2021:

	December 31,	
	2022	2021
Deferred tax assets:		
Net operating losses	\$ 43,296	\$ 25,610
Intangible assets	4,417	21,179
Research and development credits	7,835	9,736
Property and equipment	6,983	7,071
Valuation reserves and accrued liabilities	8,388	7,333
Capitalized Research and Development Costs	19,087	9,018
Stock compensation	3,051	3,832
Defined benefit obligation	1,265	1,466
Inventory	6,762	1,914
Other credits	10,296	10,158
Other	790	146
Total deferred tax asset	112,170	97,463
Valuation allowance	(36,671)	(16,090)
Deferred tax liabilities:		
Unrealized foreign currency exchange gains	\$ (2,413)	\$ (2,488)
Undistributed profits of subsidiary	(5,981)	(6,676)
Property and equipment	(15,423)	(2,420)
Other	(3,056)	(1,428)
Total deferred tax liability	(26,873)	(13,012)
Net deferred tax asset	\$ 48,626	\$ 68,361

Reconciliations between the statutory Federal income tax rate and the effective rate of income tax expense for the years ended December 31, 2022, 2021 and 2020 are as follows:

	Year Ended December 31,		
	2022	2021	2020
Statutory Federal income tax rate	21.0%	21.0%	21.0%
Increase (decrease) resulting from:			
Change in valuation allowance	6.4%	(1.2)%	(0.4)%
Effect of different tax rates of foreign jurisdictions	(4.9)%	(5.2)%	(4.7)%
Tax credits & deductions related to R&D	(10.1)%	(2.3)%	(3.8)%
Non-deductible expenses	14.9%	1.7%	2.1%
Non-deductible expenses related to acquisitions	7.0%	0.0%	0.0%
Other foreign, state and local taxes	0.7%	1.6%	1.4%
Tax impact of foreign income	4.2%	3.6%	4.9%
Stock option compensation	(3.8)%	(2.0)%	(0.4)%
Other	0.9%	0.7%	6.7%
Effective rate	36.3%	17.9%	26.8%

The Company has Net Operating Loss (“NOL”) carryforwards as follows:

Jurisdiction	Amount as of December 31, 2022	Years of Expiration
U.S. state income tax	\$ 54,912	2023-2042
Foreign	\$ 320,417	Indefinite

We have NOL carryforwards in various states associated with the benefits of the state dividends received reduction and foreign royalty exclusion. The state NOL carryforwards generally expire at various dates from 2023 to 2042. We have concluded that there is

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

not sufficient evidence these NOL carryforwards will be utilized, and thus have not recognized the benefit of these NOL carryforwards.

At December 31, 2022, certain non-U.S. subsidiaries had NOL carryforwards totaling \$320,417 which have no expiration date. The Company has a valuation allowance recorded against \$133,877 of the total non-U.S. subsidiaries' net operating loss carryforwards as of December 31, 2022.

The Company is subject to taxation in the United States and various state and foreign jurisdictions. As of December 31, 2022, the Company was no longer subject to U.S. Federal examinations by tax authorities for tax years before 2019 and was no longer subject to foreign examinations by tax authorities for tax years before 2014.

The Company currently benefits from tax holidays in various non-U.S. jurisdictions with expiration dates from 2024 – 2025. The amount of corporate income tax savings realized by the Company as a result of the tax holidays during the current and prior years was immaterial as a result of operating losses previously generated.

At December 31, 2022, 2021 and 2020, the Company had total unrecognized tax benefits of \$6,185, \$5,665 and \$4,967, respectively, all of which, if recognized, would affect the effective income tax rates. The reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2022	2021	2020
Balance at beginning of year	\$ 5,665	\$ 4,967	\$ 3,795
Additions based on tax position related to current year	972	1,105	1,489
Additions based on tax position related to prior year	433	160	179
Reductions from settlements and statute of limitation expiration	(610)	(312)	(650)
Effect of foreign currency translation	(275)	(255)	154
Balance at end of year	\$ 6,185	\$ 5,665	\$ 4,967

The Company classifies income tax-related penalties and net interest as income tax expense. In the years ended December 31, 2022, 2021 and 2020, income tax related interest and penalties were not material. It is reasonably possible that audit settlements, the conclusions of current examinations or the expiration of the statute of limitations in several jurisdictions could impact the Company's unrecognized tax benefits.

Note 19 — Segment Reporting

Segment information is used by management for making operating decisions for the Company. Management evaluates the performance of the Company's segments based primarily on operating income or loss.

The Company's reportable segments are as follows:

- *Automotive* — this segment represents the design, development, manufacturing and sales of automotive climate comfort systems, automotive cable systems, battery performance solutions, lumbar and massage comfort solutions, valve system technologies, and automotive electronic and software systems.
- *Medical* — this segment represents the results from our patient temperature management business within the medical industry.

The *Corporate* category includes unallocated costs related to our corporate headquarter activities, including selling, general and administrative costs and acquisition transaction costs, which do not meet the requirements for being classified as an operating segment.

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The tables below present segment information about the reported product revenues and operating income of the Company for years ended December 31, 2022, 2021 and 2020. With the exception of goodwill, asset information by segment is not reported since the Company does not manage assets at a segment level.

	Automotive	Medical	Corporate	Total
2022:				
Product revenues	\$ 1,161,616	\$ 43,040	\$ —	\$ 1,204,656
Depreciation and amortization	39,815	3,344	1,235	44,394
Operating income (loss)	118,433	(4,029)	(66,097)	48,307
2021:				
Product revenues	\$ 1,004,633	\$ 41,517	\$ —	\$ 1,046,150
Depreciation and amortization	35,389	2,460	931	38,780
Operating income (loss)	162,994	(1,829)	(46,159)	115,006
2020:				
Product revenues	\$ 869,998	\$ 43,100	\$ —	\$ 913,098
Depreciation and amortization	37,662	2,366	1,086	41,114
Operating income (loss)	138,410	971	(50,164)	89,217

Automotive and Medical segment product revenues by product category for each of the years ended December 31, 2022, 2021 and 2020 are as follows:

	Year Ended December 31,		
	2022	2021	2020
Climate Control Seat	\$ 426,046	\$ 393,816	\$ 342,550
Seat Heaters	283,970	270,054	249,665
Steering Wheel Heaters	120,949	102,496	76,272
Automotive Cables	76,962	84,114	73,997
Battery Performance Solutions	71,907	69,594	50,901
Electronics	44,106	51,648	53,238
Lumbar and Massage Comfort Solutions ^(a)	56,980	—	—
Valve System Technologies ^(a)	41,980	—	—
Other Automotive	38,716	32,911	23,375
Subtotal Automotive segment	1,161,616	1,004,633	869,998
Medical segment ^(a)	43,040	41,517	43,100
Total Company	\$ 1,204,656	\$ 1,046,150	\$ 913,098

(a) Includes product revenues from acquisitions since their respective acquisition dates (see Note 4).

Revenue (based on shipment destination) by geographic area for each of the years ended December 31, 2022, 2021 and 2020 is as follows:

	Year Ended December 31,		
	2022	2021	2020
United States	\$ 472,468	\$ 404,466	\$ 377,577
China	183,419	142,816	101,039
South Korea	94,937	93,516	88,745
Germany	75,367	66,929	58,536
Japan	57,718	63,527	57,785
Czech Republic	49,293	43,931	37,542
Romania	47,532	51,367	33,147
Slovakia	34,686	30,004	21,568
Finland	33,627	29,325	15,958
Mexico	23,233	18,194	13,429
Other	132,376	102,075	107,772
Total Non-U.S.	732,188	641,684	535,521
Total Company	\$ 1,204,656	\$ 1,046,150	\$ 913,098

GENTHERM INCORPORATED

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except share and per share data)

The table below lists the percentage of total product revenues generated from sales to customers which contributed 10% or more to the Company's total consolidated product revenue for the years ended December 31, 2022, 2021 and 2020:

	Year Ended December 31,		
	2022	2021	2020
Lear	16 %	15 %	15 %
Adient	15 %	15 %	14 %

Property and equipment, net, for each of the geographic areas in which the Company operates as of December 31, 2022 and 2021 is as follows:

Property and equipment, net	December 31,	
	2022	2021
Germany	\$ 47,342	\$ 16,174
China	43,162	25,411
United States	41,034	19,222
Mexico	31,597	20,296
North Macedonia	27,808	32,682
Vietnam	19,808	19,876
Czech Republic	11,381	—
Hungary	11,736	8,995
Ukraine	5,077	9,539
Other	5,535	3,075
Total	\$ 244,480	\$ 155,270

GENTHERM INCORPORATED
SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS
For the Years Ended December 31, 2022, 2021 and 2020

Description	(In thousands)				
	Balance at Beginning of Period	Charged to Costs and Expenses	Other Activity	Deductions from Reserves	Balance at End of Period
Allowance for Doubtful Accounts					
Year Ended December 31, 2020	\$ 1,193	\$ 1,298	\$ 33	\$ (1,363)	\$ 1,161
Year Ended December 31, 2021	1,161	1,066	(12)	(816)	1,399
Year Ended December 31, 2022	1,399	1,088	—	(1,267)	1,220
Allowance for Deferred Income Tax Assets					
Year Ended December 31, 2020	\$ 17,316	—	\$ 139	\$ (258)	\$ 17,197
Year Ended December 31, 2021	17,197	357	(102)	(1,362)	16,090
Year Ended December 31, 2022	16,090	2,482	18,099 ^a	-	36,671
Reserve for Inventory					
Year Ended December 31, 2020	\$ 6,073	\$ 1,768	\$ 214	\$ (914)	\$ 7,141
Year Ended December 31, 2021	7,141	2,499	(134)	(3,492)	6,014
Year Ended December 31, 2022	6,014	15,923	(133)	(2,558)	19,246

(a) Includes amount relates to valuation allowance from acquisitions.

LIST OF SUBSIDIARIES

Name	Jurisdiction of Formation
Gentherm Holding (Malta) Ltd.	Malta
Gentherm Automotive Systems (Malta) Ltd.	Malta
Gentherm Automotive Technologies (Shanghai) Co. Ltd.	China
Gentherm Electronics (Shenzhen) Co. Ltd.	China
Gentherm Investment (Shanghai) Co. Ltd.	China
Gentherm Automotive Systems (China) Ltd.	China
Gentherm International Holdings (Hong Kong) Limited	China
Alfmeier Automotive Systems Shanghai Co Ltd.	China
Jiangmen Dacheng Medical Equipment Co. Ltd.	China
Alfmeier CZ s.r.o.	Czech Republic
Gentherm GmbH	Germany
Gentherm Enterprises GmbH	Germany
Gentherm Licensing GmbH	Germany
Cosmiq Industrie Vewaltungs – und Vemietungs GmbH	Germany
Alfmeier Prazision SE	Germany
K3 Works GmbH	Germany
Gentherm Vietnam Co. Ltd.	Vietnam
Gentherm Japan Inc.	Japan
Gentherm Korea Inc.	South Korea
Alfmeier Korea Co. Ltd.	South Korea
IOB Medical, Inc.	Maryland
Gentherm Properties I, LLC	Michigan
Gentherm Properties II, LLC	Michigan
Gentherm Equity, LLC	Michigan
Gentherm Licensing, L.P.	Michigan
Gentherm Medical, LLC	Ohio
Alfmeier Corporation	South Carolina
Alfmeier Fredrichs & Rath, LLC	South Carolina
Gentherm (Texas), Inc.	Texas
Gentherm Hungary Kft	Hungary
Gentherm Financing Hungary Kft	Hungary
Gentherm Ukraine TOV	Ukraine
Gentherm de Mexico S.A. de C.V	Mexico
Alfmeier Fredrichs & Rath de Mexico S.A. de C.V.	Mexico
Gentherm Canada ULC	Canada

Stihler Electronic GmbH

Germany

Gentherm U.K. LTD.

United Kingdom

Gentherm Luxembourg II S.a.r.l

Luxembourg

Gentherm North Macedonia DOOEL Prilep

North Macedonia

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 Nos. 333-139868, as amended, and 333-164990, as amended) pertaining to the Gentherm Incorporated 2006 Equity Incentive Plan,
- (2) Registration Statement (Form S-8 Nos. 333-176884, as amended, and 333-181975, as amended) pertaining to the Gentherm Incorporated 2011 Equity Incentive Plan, and
- (3) Registration Statement (Form S-8 Nos. 333-189442, 333-218155, and 333-245646) pertaining to the Gentherm Incorporated 2013 Equity Incentive Plan,

of our reports dated February 24, 2023, with respect to the consolidated financial statements and schedule of Gentherm Incorporated and the effectiveness of internal control over financial reporting of Gentherm Incorporated included in this Annual Report (Form 10-K) of Gentherm Incorporated for the year ended December 31, 2022.

/s/ ERNST & YOUNG LLP

Detroit, Michigan

February 24, 2023

POWER OF ATTORNEY

Each of the undersigned, being a Member of the Board of Directors of Gentherm Incorporated (the "Registrant"), hereby severally constitutes and appoints Phillip Eyler, the Registrant's Chief Executive Officer, with full powers of substitution and resubstitution, his true and lawful attorney, with full powers to sign for him, in his name, in the capacity indicated herein, (a) the annual report of the Registrant for the fiscal year ending December 31, 2022 on Form 10-K and (b) any and all amendments to such Form 10-K, and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes said attorney might or could do in person, and hereby ratifying and confirming all that said attorney, or his substitute or substitutes, shall do or cause to be done by virtue of this Power of Attorney. This power of attorney may be executed in separate original or facsimile counterparts.

IN WITNESS WHEREOF, the undersigned have executed this instrument this 24th day of February, 2023.

/s/ Sophie Desormière

Sophie Desormière

/s/ David Heinzmann

David Heinzmann

/s/ Ronald Hundzinski

Ronald Hundzinski

/s/ Charles Kummeth

Charles Kummeth

/s/ Betsy Meter

Betsy Meter

/s/ Byron Shaw

Byron Shaw

/s/ John Stacey

John Stacey

CERTIFICATION

I, Phillip Eyler, certify that:

1. I have reviewed this annual report on Form 10-K for the period ended December 31, 2022 of Gentherm Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with 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 the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Phillip Eyler

Phillip Eyler

President & Chief Executive Officer

February 24, 2023

CERTIFICATION

I, Matteo Anversa, certify that:

1. I have reviewed this annual report on Form 10-K for the period ended December 31, 2022 of Gentherm Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with 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 the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Matteo Anversa

Matteo Anversa

Executive Vice President, Chief Financial Officer and
Treasurer

February 24, 2023

**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 on Form 10-K for the period ended December 31, 2022 of Gentherm Incorporated (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Phillip Eyler, President & Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Phillip Eyler

Phillip Eyler
President & Chief Executive Officer
February 24, 2023

**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 on Form 10-K for the period ended December 31, 2022 of Gentherm Incorporated (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Matteo Anversa, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Matteo Anversa

Matteo Anversa

Executive Vice President, Chief Financial
Officer and Treasurer

February 24, 2023
