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

FORM 10-Q

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

For the quarterly period ended September 30, 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	**95-4318554**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
21680 Haggerty Road, Northville, MI	**48167**
(Address of principal executive offices)	**(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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See 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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

At October 28, 2022, there were 33,198,067 issued and outstanding shares of Common Stock of the registrant.

GENTHERM INCORPORATED

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

GENTHERM INCORPORATED

CONSOLIDATED CONDENSED BALANCE SHEETS
(In thousands, except share data)
(Unaudited)

	September 30, 2022	December 31, 2021
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 139,163	$ 190,606
Accounts receivable, net	248,570	182,987
Inventory:		
Raw materials	154,273	96,426
Work in process	17,157	9,495
Finished goods	62,465	53,556
Inventory, net	233,895	159,477
Other current assets	84,344	32,775
Total current assets	705,972	565,845
Property and equipment, net	228,056	155,270
Goodwill	125,273	66,033
Other intangible assets, net	68,639	37,554
Operating lease right-of-use assets	30,214	24,387
Deferred income tax assets	66,322	69,630
Other non-current assets	16,857	16,624
Total assets	$ 1,241,333	$ 935,343
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 208,338	$ 122,727
Current lease liabilities	7,448	5,669
Current maturities of long-term debt	3,540	2,500
Other current liabilities	100,898	82,193
Total current liabilities	320,224	213,089
Long-term debt, less current maturities	232,000	36,250
Non-current lease liabilities	22,013	19,789
Pension benefit obligation	5,850	6,832
Other non-current liabilities	37,157	5,577
Total liabilities	$ 617,244	$ 281,537
Shareholders' equity:		
Common Stock:		
No par value; 55,000,000 shares authorized 33,196,404 and 33,008,185 issued and outstanding at September 30, 2022 and December 31, 2021, respectively	119,801	118,646
Paid-in capital	5,477	5,866
Accumulated other comprehensive loss	(96,051)	(36,922)
Accumulated earnings	594,862	566,216
Total shareholders' equity	624,089	653,806
Total liabilities and shareholders' equity	$ 1,241,333	$ 935,343

GENTHERM INCORPORATED

CONSOLIDATED CONDENSED STATEMENTS OF INCOME
(In thousands, except per share data)
(Unaudited)

	Three Months Ended September 30, 2022	Three Months Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Product revenues	$ 332,962	$ 243,384	$ 861,334	$ 797,924
Cost of sales	252,610	173,997	657,492	561,655
Gross margin	80,352	69,387	203,842	236,269
Operating expenses:				
Net research and development expenses	22,666	20,590	62,425	56,420
Selling, general and administrative expenses	34,859	27,344	96,109	83,093
Restructuring expenses	6	749	561	3,631
Total operating expenses	57,531	48,683	159,095	143,144
Operating income	22,821	20,704	44,747	93,125
Interest income (expense), net	714	(515)	(1,285)	(2,184)
Foreign currency (loss) gain	(8,285)	133	(1,516)	391
Other income	361	10	698	13
Earnings before income tax	15,611	20,332	42,644	91,345
Income tax expense	5,784	4,646	13,998	17,959
Net income	$ 9,827	$ 15,686	$ 28,646	$ 73,386
Basic earnings per share	$ 0.30	$ 0.47	$ 0.87	$ 2.22
Diluted earnings per share	$ 0.29	$ 0.47	$ 0.86	$ 2.19
Weighted average number of shares – basic	33,162	33,178	33,106	33,075
Weighted average number of shares – diluted	33,470	33,609	33,460	33,489

See accompanying notes to the consolidated condensed financial statements.

GENTHERM INCORPORATED

CONSOLIDATED CONDENSED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(In thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	$ 9,827	$ 15,686	$ 28,646	$ 73,386
Other comprehensive loss:				
Pension benefit obligations	6	—	62	—
Foreign currency translation adjustments	(28,682)	(7,432)	(60,676)	(16,056)
Unrealized gain (loss) on foreign currency derivative securities, net of tax	1,273	(474)	1,490	(1,044)
Unrealized loss on commodity derivative securities, net of tax	—	(35)	(5)	(35)
Other comprehensive loss, net of tax	(27,403)	(7,941)	(59,129)	(17,135)
Comprehensive (loss) income	$ (17,576)	$ 7,745	$ (30,483)	$ 56,251

See accompanying notes to the consolidated condensed financial statements.

GENTHERM INCORPORATED

CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2022	2021
Operating Activities:		
Net income	$ 28,646	$ 73,386
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	30,470	29,430
Deferred income taxes	(1,207)	3,867
Non-cash stock based compensation	3,383	11,760
Loss on disposition of property and equipment	620	638
Other	881	(650)
Changes in assets and liabilities:		
Accounts receivable, net	(55,780)	26,162
Inventory	(48,930)	(34,019)
Other assets	(10,868)	597
Accounts payable	60,983	9,231
Other liabilities	4,759	(3,296)
Net cash provided by operating activities	12,957	117,106
Investing Activities:		
Purchases of property and equipment	(25,737)	(29,585)
Proceeds from the sale of property and equipment	175	11
Acquisition of businesses, net of cash acquired	(224,097)	(2,827)
Proceeds from deferred purchase price of factored receivables	2,168	—
Cost of technology investments	(350)	(7,557)
Net cash used in investing activities	(247,841)	(39,958)
Financing Activities:		
Borrowings on debt	207,000	—
Repayments of debt	(11,559)	(151,993)
Proceeds from the exercise of Common Stock options	1,556	7,467
Taxes withheld and paid on employees' share-based payment awards	(5,415)	(3,991)
Acquisition contingent consideration payment	—	(69)
Net cash provided by (used in) financing activities	191,582	(148,586)
Foreign currency effect	(8,141)	(1,821)
Net decrease in cash and cash equivalents	(51,443)	(73,259)
Cash and cash equivalents at beginning of period	190,606	268,345
Cash and cash equivalents at end of period	$ 139,163	$ 195,086
Supplemental disclosure of cash flow information:		
Cash paid for taxes	$ 13,509	$ 12,348
Cash paid for interest	$ 3,334	$ 1,823

See accompanying notes to the consolidated condensed financial statements.

GENTHERM INCORPORATED

CONSOLIDATED CONDENSED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(In thousands)
(Unaudited)

	Common Stock		Paid-in	Accumulated Other Comprehensive	Accumulated	
	Shares	Amount	Capital	Loss	Earnings	Total
Balance at December 31, 2021	33,008	$ 118,646	$ 5,866	$ (36,922)	$ 566,216	$ 653,806
Net income	—	—	—	—	11,747	11,747
Other comprehensive loss	—	—	—	(8,806)	—	(8,806)
Stock compensation, net	119	(814)	(146)	—	—	(960)
Balance at March 31, 2022	33,127	117,832	5,720	(45,728)	577,963	655,787
Net income	—	—	—	—	7,072	7,072
Other comprehensive loss	—	—	—	(22,920)	—	(22,920)
Stock compensation, net	6	3,256	—	—	—	3,256
Balance at June 30, 2022	33,133	$ 121,088	$ 5,720	$ (68,648)	$ 585,035	$ 643,195
Net income	—	—	—	—	9,827	9,827
Other comprehensive loss	—	—	—	(27,403)	—	(27,403)
Stock compensation, net	63	(1,287)	(243)	—	—	(1,530)
Balance at September 30, 2022	33,196	$ 119,801	$ 5,477	$ (96,051)	$ 594,862	$ 624,089

	Common Stock		Paid-in	Accumulated Other Comprehensive	Accumulated	
	Shares	Amount	Capital	Loss	Earnings	Total
Balance at December 31, 2020	32,921	$ 121,073	$ 7,458	$ (14,982)	$ 472,782	$ 586,331
Net income	—	—	—	—	32,909	32,909
Other comprehensive loss	—	—	—	(13,674)	—	(13,674)
Stock compensation, net	190	8,527	(1,335)	—	—	7,192
Balance at March 31, 2021	33,111	129,600	6,123	(28,656)	505,691	612,758
Net income	—	—	—	—	24,791	24,791
Other comprehensive income	—	—	—	4,480	—	4,480
Stock compensation, net	34	3,142	39	—	—	3,181
Balance at June 30, 2021	33,145	$ 132,742	$ 6,162	$ (24,176)	$ 530,482	$ 645,210
Net income	—	—	—	—	15,686	15,686
Other comprehensive income	—	—	—	(7,941)	—	(7,941)
Stock compensation, net	80	2,707	(182)	—	—	2,525
Balance at September 30, 2021	33,225	$ 135,449	$ 5,980	$ (32,117)	$ 546,168	$ 655,480

See accompanying notes to the consolidated condensed financial statements.

Note 1 – Overview

Gentherm Incorporated, a Michigan corporation, and its consolidated subsidiaries ("Gentherm", "we", "us", "our" or the "Company") 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 to create new product applications for existing and new markets. 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 is also developing a number of new technologies and products that are expected to enable improvements to existing products and to create 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 July 29, 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.

Basis of Presentation and Significant Accounting Policies

The unaudited consolidated condensed financial statements included herein have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to those rules and regulations. The information furnished in the consolidated condensed financial statements include all adjustments (consisting of only normal, recurring adjustments), considered necessary to present fairly the results of operations, financial position and cash flows of the Company. These financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2021. The operating results for interim periods are not necessarily indicative of results that may be expected for any other interim period or for the full year.

In preparing these 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 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.

Principles of Consolidation

The consolidated condensed 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 entities 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 entities are measured at cost, less impairments, adjusted for observable price changes in orderly transactions for identical or similar investments of the same issuer.

Variable Interest Entities

The Company maintains an ownership interest in a VIE, Carrar Ltd. (“Carrar”). Carrar is a 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. The Carrar investment was $5,200 as of September 30, 2022 and December 31, 2021, and is recorded in Other non-current assets in the consolidated condensed balance sheets.

Revenue Recognition

The Company has no material contract assets or contract liabilities as of September 30, 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 $2,085 and $1,946 as of September 30, 2022 and December 31, 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.

Note 2 – New 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. The adoption of this standard is not expected to have a material impact on the Company’s financial statements.

Note 3 – Acquisitions

Alfmeier Präzision SE

On July 29, 2022, the Company transferred consideration to acquire 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 in comfort, health, wellness, and energy efficiency and aligns with global consumer demand for expanded offerings in vehicle passenger comfort.

The acquisition date for accounting purposes was determined to be August 1, 2022 and the total consideration was $164,887. On the closing date, the Company made cash payments of $188,941, net of cash acquired. We expect to receive cash from the seller of $24,054 (“Purchase Consideration Receivable”) in connection with the finalization and settlement of post-closing adjustments in accordance with the purchase agreement. Substantially all of the adjustments known as of this filing relate to lower cash on hand as of the closing date than estimated and a pre-closing reorganization transaction. We expect additional adjustments for actual working capital, cash and cash-like items and debt and debt-like items as of the closing date. All post-closing adjustments are expected to be finalized within 120 days of the closing date, provided there are no disputes. Potential disputes shall be resolved in accordance with the purchase agreement. The Purchase Consideration Receivable is recorded in Other current assets in the consolidated condensed balance sheets as of September 30, 2022. 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 condensed financial statements:

	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2022
Product revenues	$ 41,281	$ 41,281
Operating loss	(3,104)	(3,104)

The acquisition was accounted for as a business combination with the purchase price allocated on a preliminary basis using information available as of September 30, 2022. 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 purchase price and related allocation are preliminary and could be revised as a result of: adjustments made to the purchase price; additional information obtained regarding liabilities assumed, including, but not limited to, contingent liabilities, revisions of provisional estimates of fair values, including, but not limited to, the completion of independent appraisals and valuations related to property, plant and equipment and intangible assets and certain tax attributes. The final valuation of assets acquired and liabilities assumed may be materially different from the estimated values shown below.

The following table summarizes the preliminary allocation of the purchase consideration to the estimated fair values of assets acquired and liabilities assumed as of the acquisition date:

Purchase price, cash consideration, net of cash acquired	$ 188,941
Purchase price, Purchase Consideration Receivable	$ (24,054)
Total purchase price, net of cash acquired	$ 164,887
Accounts receivable	24,988
Inventory	36,026
Prepaid expenses and other assets	20,920
Operating lease right-of-use assets	4,608
Property and equipment	89,942
Other intangible assets	22,668
Goodwill	43,678
Assumed liabilities	(55,994)
Deferred tax liabilities	(21,949)
Net assets acquired	$ 164,887

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

	Preliminary Fair Value	Weighted Average Life (in years)
Definite-lived:		
Customer related	$ 11,233	13
Technology	11,435	9
Total	$ 22,668	

The estimated 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 as if the acquisition of Alfmeier had occurred as of January 1, 2021:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Product revenues	$ 352,946	$ 300,520	$ 1,005,337	$ 992,403

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. ("IOB"). 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 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.

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 condensed financial statements:

	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2022
Product revenues	$ 1,234	$ 1,234
Operating loss	(153)	(153)

The acquisition was accounted for as a business combination with the purchase price allocated on a preliminary basis using information available as of September 30, 2022. 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 purchase price and related allocation are preliminary and could be revised as a result of: adjustments made to the purchase price; additional information obtained regarding liabilities assumed, including, but not limited to, contingent liabilities, revisions of provisional estimates of fair values, including, but not limited to, the completion of independent appraisals and valuations related to property, plant and equipment and intangible assets and certain tax attributes. The final valuation of assets acquired and liabilities assumed may be materially different from the estimated values shown below.

The following table summarizes the preliminary allocation of the purchase consideration to the estimated fair values of assets acquired and liabilities assumed as of the acquisition date:

Purchase price, cash consideration, net of cash acquired	$	35,048
Accounts receivable		746
Inventory		1,942
Prepaid expenses and other assets		152
Operating lease right-of-use assets		841
Property and equipment		684
Other intangible assets		19,094
Goodwill		22,995
Assumed liabilities		(2,799)
Deferred tax liabilities		(8,607)
Net assets acquired	$	35,048

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

		Preliminary Fair Value	Weighted Average Life (in years)
Definite-lived:			
Customer related	$	11,873	12
Technology		4,749	12
Indefinite-lived:			
Tradenames		2,472	—
Total	$	19,094	

The estimated 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 were presented.

Note 4 – Restructuring

Manufacturing Footprint Rationalization

In September 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 is relocating and consolidating certain automotive electronics manufacturing plants in North America and China. During 2021, the Company completed the closures and relocation of its automotive electronics manufacturing operations from Burlington, Canada to Celaya, Mexico and from Longgang, Shenzhen, China to Bantian, Shenzhen, China. As of September 30, 2022, the electronics manufacturing in Acuña, Mexico continues to transition to Celaya, Mexico.

During the three and nine months ended September 30, 2022, the Company recognized restructuring expense of $0 and $50, respectively, for employee separation costs and $0 and $198, respectively, for other costs. During the three and nine months ended September 30, 2021, the Company recognized restructuring expense of $294 and $1,259 for employee separation costs, respectively, $26 and $218 for accelerated depreciation, respectively, and $617 and $1,269 for other costs, respectively.

The Company has recorded approximately $10,353 of restructuring expenses since the inception of this program and as of September 30, 2022, $538 remains accrued. Actions under the Plan are expected to be substantially completed by the end of 2022 and future expenses are expected to be less than $1,000.

Other Restructuring Activities

As part of the Company’s continued efforts to optimize its cost structure, the Company has undertaken several discrete restructuring actions. During the three and nine months ended September 30, 2022, the Company recognized $6 and $313, respectively, for other costs. During the three and nine months ended September 30, 2021, the Company recognized $(188) and $885, respectively, of employee separation costs. 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.

Restructuring Expenses By Reporting Segment

The following table summarizes restructuring expense for the three and nine months ended September 30, 2022 and 2021 by reporting segment:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Automotive	$ 6	$ 701	$ 561	$ 2,567
Medical	—	—	—	—
Corporate	—	48	—	1,064
Total	$ 6	$ 749	$ 561	$ 3,631

Restructuring Liability

Restructuring liabilities are classified as other current liabilities in the consolidated condensed balance sheets. The following table summarizes restructuring liability for the nine months ended September 30, 2022:

	Employee Separation Costs	Other Related Costs	Total
Balance at December 31, 2021	$ 1,494	$ —	$ 1,494
Additions, charged to restructuring expenses	—	131	131
Cash payments	(544)	(131)	(675)
Change in estimate	50	—	50
Currency translation	(18)	—	(18)
Balance at March 31, 2022	$ 982	$ —	$ 982
Additions, charged to restructuring expenses	—	374	374
Cash payments	(83)	(97)	(180)
Currency translation	(32)	—	(32)
Balance at June 30, 2022	$ 867	$ 277	$ 1,144
Additions, charged to restructuring expenses	—	6	6
Cash payments	(248)	(6)	(254)
Currency translation	(31)	—	(31)
Balance As of September 30, 2022	$ 588	$ 277	$ 865

Note 5 – Details of Certain Balance Sheet Components

	September 30, 2022	December 31, 2021
Other current assets:		
Purchase Consideration Receivable	$ 23,526	$ —
Notes receivable	11,228	13,033
Income tax and other tax receivable	16,837	10,681
Prepaid expenses	10,224	3,407
Billable tooling	10,372	3,778
Other	12,157	1,876
Total other current assets	$ 84,344	$ 32,775
Other current liabilities:		
Accrued employee liabilities	$ 34,631	$ 28,818
Liabilities from discounts and rebates	22,764	27,343
Income tax and other taxes payable	16,265	17,068
Accrued warranty	3,590	1,916
Restructuring	865	1,494
Other	22,783	5,554
Total other current liabilities	$ 100,898	$ 82,193

Note 6 – Goodwill and Other Intangibles

Goodwill

Changes in the carrying amount of goodwill, by reportable segment, for the nine months ended September 30, 2022 was as follows:

	Automotive	Medical	Total
Balance as of December 31, 2021	$ 37,329	$ 28,704	$ 66,033
Exchange rate impact	(4,825)	(2,608)	(7,433)
Acquisition of Alfmeier	43,678	—	43,678
Acquisition of Dacheng	—	22,995	22,995
Balance as of September 30, 2022	$ 76,182	$ 49,091	$ 125,273

Other Intangible Assets

Other intangible assets and accumulated amortization balances as of September 30, 2022 and December 31, 2021 were as follows:

	September 30, 2022			December 31, 2021		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Definite-lived:						
Customer relationships	$ 99,318	$ (57,718)	$ 41,600	$ 90,448	$ (64,105)	$ 26,343
Technology	36,640	(22,502)	14,138	29,464	(24,487)	4,977
Product development costs	21,250	(16,390)	4,860	20,329	(19,772)	557
Software development	1,007	—	1,007	1,007	—	1,007
Indefinite-lived:						
Tradenames	7,034	—	7,034	4,670	—	4,670
Total	$ 165,249	$ (96,610)	$ 68,639	$ 145,918	$ (108,364)	$ 37,554

In addition to annual impairment testing, which is performed in the fourth quarter of each fiscal year, the Company continuously monitors for events and circumstances that could negatively impact the key assumptions used in determining fair value and therefore require interim impairment testing, including long-term revenue growth projections, profitability, discount rates, recent market valuations from transactions by comparable companies, volatility in the Company's market capitalization, and general industry, market and macroeconomic conditions. We are not presently aware of any events or circumstances that would require us to revise the carrying value of our assets or liabilities as of September 30, 2022.

Note 7 – Debt

The following table summarizes the Company's debt as of September 30, 2022 and December 31, 2021:

	September 30, 2022		December 31, 2021	
	Interest Rate	Principal Balance	Interest Rate	Principal Balance
Credit Agreement:				
U.S. Revolving Note (U.S. Dollar denominations)	4.26 %	$ 232,000	1.35 %	$ 35,000
Other loans	3.93% - 5.21%	3,540	5.21 %	3,750
Total debt		235,540		38,750
Current maturities		(3,540)		(2,500)
Long-term debt, less current maturities		$ 232,000		$ 36,250

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 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 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 September 30, 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 extends 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 September 30, 2022, the Company was in compliance with the terms of the Second 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, $264,460 remained available as of September 30, 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 nine months ended September 30, 2022.

The scheduled principal maturities of our debt as of September 30, 2022 were as follows:

	U.S. Revolving Note	Other Debt	Total
2022	$ —	$ 1,271	$ 1,271
2023	—	2,269	2,269
2024	—	—	—
2025	—	—	—
2026	—	—	—
2027	232,000	—	232,000
Total	$ 232,000	$ 3,540	$ 235,540

Note 8 – 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 that 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 matters will not have a material adverse effect on its consolidated results of operations or financial position.

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:

	Nine Months Ended September 30,	
	2022	2021
Balance at the beginning of the period	$ 1,916	$ 2,391
Warranty opening balance from acquired entities	907	—
Warranty claims paid	(890)	(1,374)
Warranty expense for products shipped during the current period	1,963	1,722
Adjustments to warranty estimates from prior periods	(200)	318
Adjustments due to currency translation	(106)	(44)
Balance at the end of the period	$ 3,590	$ 3,013

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. 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 September 30, 2022, the Company's total commitments for these semiconductor chip agreements was $37,311. 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 September 30, 2022 were immaterial.

Note 9 –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.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	$ 9,827	$ 15,686	$ 28,646	$ 73,386
Basic weighted average shares of Common Stock outstanding	33,162,181	33,177,743	33,105,854	33,075,399
Dilutive effect of stock options, restricted stock awards and restricted stock units	308,258	431,341	353,896	413,501
Diluted weighted average shares of Common Stock outstanding	33,470,439	33,609,084	33,459,750	33,488,900
Basic earnings per share	$ 0.30	$ 0.47	$ 0.87	$ 2.22
Diluted earnings per share	$ 0.29	$ 0.47	$ 0.86	$ 2.19

There were no shares excluded from the Company's diluted earnings per share for the three and nine months ended September 30, 2022 and 2021 on the basis that their inclusion would have an anti-dilutive impact on the calculation.

Note 10 – 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, 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 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 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 Accumulated other comprehensive loss in the consolidated condensed 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 condensed 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 designated foreign currency and copper commodity hedging instruments, if any, to cost of sales in the consolidated condensed statements of income. Cash flows associated with derivatives are reported in net cash provided by operating activities in the Company's consolidated condensed 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 is 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 three and nine months ended September 30, 2022 the Company recognized expense of $4,288 and $3,806, respectively, in Foreign currency (loss) gain within the consolidated condensed income statement.

Information related to the recurring fair value measurement of derivative instruments in our consolidated condensed balance sheet as of September 30, 2022 is as follows:

			Asset Derivatives		Liability Derivatives		
	Fair Value Hierarchy	**Notional Amount**	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**	**Net Asset/ (Liabilities)**
Derivatives Designated as Cash Flow Hedges							
Foreign currency derivatives	Level 2	$ 47,040	Other current assets	$ 2,216	Other current liabilities	$ —	$ 2,216
Derivatives Not Designated as Hedging Instruments							
Interest rate contracts	Level 2	$ 100,000	Other current assets	$ 2,498	Other current liabilities	$ —	$ 2,498

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

			Asset Derivatives		Liability Derivatives		
	Fair Value Hierarchy	Notional Amount	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value	Net Asset/ (Liabilities)
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

Information relating to the effect of derivative instruments on our consolidated condensed statements of income and the consolidated condensed statements of comprehensive income is as follows:

		Three Months Ended September 30,		Nine Months Ended September 30,	
	Location	2022	2021	2022	2021
Derivatives Designated as Cash Flow Hedges					
Foreign currency derivatives	Cost of sales – income	$ 321	$ 448	$ 807	$ 1,455
	Other comprehensive (loss) income	1,627	(606)	1,921	(1,335)
Total foreign currency derivatives		$ 1,948	$ (158)	$ 2,728	$ 120
Commodity derivatives	Cost of sales – income	$ —	$ 2	$ 19	$ 2
	Other comprehensive loss	—	(44)	(6)	(44)
Total commodity derivatives		$ —	$ (42)	$ 13	$ (42)
Derivatives Not Designated as Hedging Instruments					
Foreign currency derivatives	Foreign currency (loss) gain	$ (4,288)	$ —	$ (3,806)	$ —
Total foreign currency derivatives		$ (4,288)	$ —	$ (3,806)	$ —
Interest rate contracts	Interest income (expense), net	$ 3,191	$ —	$ 2,498	$ —
Total interest rate derivatives		$ 3,191	$ —	$ 2,498	$ —

Accounts 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. As of September 30, 2022, there were $20,221 outstanding receivables transferred under the receivable factoring agreements and our availability under the receivables factoring agreements was $37,976.

Note 11 – Fair Value Measurements

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 that 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 instruments (see Note 10) and pension plan assets, the Company had no material financial assets and liabilities that were carried at fair value at September 30, 2022 and December 31, 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. The Company utilized a third-party to assist in the Level 3 fair value estimates of other intangible assets for recent acquisitions (see Note 3). The estimated fair values of these assets were based on third-party valuations and management's estimates, generally utilizing income and market approaches.

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 September 30, 2022, and December 31, 2021, the carrying values of the indebtedness under the Company's Second Amended and Restated Credit Agreement were not materially different than the estimated fair values because the interest rates on variable rate debt approximated rates currently available to the Company (see Note 7).

Note 12 – Equity

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. The Company did not make any repurchases under the 2020 Stock Repurchase Program during the three and nine months ended September 30, 2022, or September 30, 2021. The 2020 Stock Repurchase Program had $130,000 repurchase authorization remaining as of September 30, 2022.

Note 13 – Reclassifications Out of Accumulated Other Comprehensive Loss

Reclassification adjustments and other activities impacting Accumulated other comprehensive loss during the three and nine months ended September 30, 2022 and 2021 were as follows:

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Foreign Currency Hedge Derivatives	Commodity Hedge Derivatives	Total
Balance at June 30, 2022	$ (2,837)	$ (66,182)	$ 371	$ —	$ (68,648)
Other comprehensive (loss) income before reclassifications	—	(28,411)	1,948	—	(26,463)
Income tax effect of other comprehensive (loss) income before reclassifications	—	(271)	(423)	—	(694)
Amounts reclassified from accumulated other comprehensive loss into net income	6	—	(321) [a]	— [a]	(315)
Income taxes reclassified into net income	—	—	69	—	69
Net current period other comprehensive income (loss)	6	(28,682)	1,273	—	(27,403)
Balance at September 30, 2022	$ (2,831)	$ (94,864)	$ 1,644	$ —	$ (96,051)

(a) The amounts reclassified from accumulated other comprehensive loss were included in cost of sales.

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Foreign Currency Hedge Derivatives	Commodity Hedge Derivatives	Total
Balance at June 30, 2021	$ (3,451)	$ (21,261)	$ 536	$ —	$ (24,176)
Other comprehensive loss before reclassifications	—	(7,267)	(158)	(42)	(7,467)
Income tax effect of other comprehensive loss before reclassifications	—	(165)	35	9	(121)
Amounts reclassified from accumulated other comprehensive loss into net income	—	—	(448) [a]	(2) [a]	(450)
Income taxes reclassified into net income	—	—	97	—	97
Net current period other comprehensive loss	—	(7,432)	(474)	(35)	(7,941)
Balance at September 30, 2021	$ (3,451)	$ (28,693)	$ 62	$ (35)	$ (32,117)

(a) The amounts reclassified from accumulated other comprehensive loss were included in cost of sales.

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Foreign Currency Hedge Derivatives	Commodity Hedge Derivatives	Total
Balance at December 31, 2021	$ (2,893)	$ (34,188)	$ 154	$ 5	$ (36,922)
Other comprehensive (loss) income before reclassifications	—	(60,023)	2,728	13	(57,282)
Income tax effect of other comprehensive (loss) income before reclassifications	—	(653)	(606)	(3)	(1,262)
Amounts reclassified from accumulated other comprehensive loss into net income	76	—	(807) [a]	(19) [a]	(750)
Income taxes reclassified into net income	(14)	—	175	4	165
Net current period other comprehensive income (loss)	62	(60,676)	1,490	(5)	(59,129)
Balance at September 30, 2022	$ (2,831)	$ (94,864)	$ 1,644	$ —	$ (96,051)

(a) The amounts reclassified from accumulated other comprehensive loss were included in cost of sales.

	Defined Benefit Pension Plans	Foreign Currency Translation Adjustments	Foreign Currency Hedge Derivatives	Commodity Hedge Derivatives	Total
Balance at December 31, 2020	$ (3,451)	$ (12,637)	$ 1,106	$ —	$ (14,982)
Other comprehensive (loss) income before reclassifications	—	(15,608)	120	(42)	(15,530)
Income tax effect of other comprehensive (loss) income before reclassifications	—	(448)	(26)	9	(465)
Amounts reclassified from accumulated other comprehensive loss into net income	—	—	(1,455) [a]	(2) [a]	(1,457)
Income taxes reclassified into net income	—	—	317	—	317
Net current period other comprehensive loss	—	(16,056)	(1,044)	(35)	(17,135)
Balance at September 30, 2021	$ (3,451)	$ (28,693)	$ 62	$ (35)	$ (32,117)

(a) The amounts reclassified from accumulated other comprehensive loss were included in cost of sales.

The Company expects all of the existing gains and losses related to foreign currency derivatives reported in Accumulated other comprehensive loss as of September 30, 2022 to be reclassified into earnings during the next twelve months. See Note 10 for additional information about derivative financial instruments and the effects from reclassification to net income.

Note 14 – Income Taxes

At the end of each interim period, the Company makes its best estimate of the annual expected effective income tax rate and applies that rate to its ordinary year-to-date earnings or loss. The income tax provision or benefit related to unusual or infrequent items, if applicable, that will be separately reported or reported net of their related tax effects are individually computed and recognized in the interim period in which those items occur. In addition, the effect of changes in enacted tax laws or rates, tax status, judgment on the realizability of a beginning-of-the-year deferred tax asset in future years or income tax contingencies is recognized in the interim period in which the change occurs.

The computation of the annual expected effective income tax rate at each interim period requires certain estimates and assumptions including, but not limited to, the expected pre-tax income (or loss) for the year, projections of the proportion of income (and/or loss) earned and taxed in respective jurisdictions, permanent and temporary differences, and the likelihood of the realizability of deferred tax assets generated in the current year. Jurisdictions with a projected loss for the year for which no tax benefit can be recognized due to a valuation allowance are excluded from the estimated annual effective tax rate. The impact of such an exclusion could result in a higher or lower effective tax rate during a particular quarter, based upon the composition and timing of actual earnings compared to annual projections. The estimates used to compute the provision or benefit for income taxes may change as new events occur, additional information is obtained or as our tax environment changes. To the extent that the expected annual effective income tax rate changes, the effect of the change on prior interim periods is included in the income tax provision in the period in which the change in estimate occurs.

A summary of the provision for income taxes and the corresponding effective tax rate for the three and nine months ended September 30, 2022 and 2021, is shown below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Income tax expense	$ 5,784	$ 4,646	$ 13,998	$ 17,959
Earnings before income tax	$ 15,611	$ 20,332	$ 42,644	$ 91,345
Effective tax rate	37.1 %	22.9 %	32.8 %	19.7 %

Income tax expense was $5,784 for the three months ended September 30, 2022 on earnings before income tax of $15,611, representing an effective tax rate of 37.1%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, the unfavorable impact of the global intangible low-tax income (“GILTI”), and the quarterly accrual for uncertain tax positions partially offset by the impact of certain favorable tax effects on equity vesting.

Income tax expense was $4,646 for the three months ended September 30, 2021 on earnings before income tax of $20,332 representing an effective tax rate of 22.9%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to the unfavorable impact of quarterly accrual for uncertain tax positions, GILTI, withholding taxes and other non-deductible expenses, partially offset by the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate in the third quarter of 2021.

Income tax expense was $13,998 for the nine months ended September 30, 2022 on earnings before income tax of $42,644, representing an effective tax rate of 32.8%. The effective tax rate differed from the U.S. Federal statutory rate of 21% primarily due to the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, the unfavorable impact of GILTI, and the quarterly accrual for uncertain tax positions, partially offset by the impact of certain favorable tax effects of equity vesting.

Income tax expense was $17,959 for the nine months ended September 30, 2021 on earnings before income tax of $91,345 representing an effective tax rate of 19.7%. The effective tax rate differed from the U.S. Federal statutory rate of 21% primarily due to certain favorable tax effect on equity vesting, intercompany transactions in 2021 and the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, partially offset by the unfavorable impact of uncertain tax positions, GILTI, withholding taxes and other non-deductible expenses.

Note 15 – Segment Reporting

Segment information is used by management for making strategic 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, lumbar and massage comfort solutions, valve system technologies, battery performance solutions, 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.

The tables below present segment information about the reported product revenues, depreciation and amortization and operating income (loss) of the Company for three and nine months ended September 30, 2022 and 2021.

Three Months Ended September 30,	**Automotive**	**Medical**	**Corporate**	**Total**
2022				
Product revenues	$ 322,555	$ 10,407	$ —	$ 332,962
Depreciation and amortization	10,499	1,035	302	$ 11,836
Operating income (loss)	43,067	(2,232)	(18,014)	$ 22,821
2021				
Product revenues	$ 233,028	$ 10,356	$ —	$ 243,384
Depreciation and amortization	8,977	654	228	$ 9,859
Operating income (loss)	33,129	(974)	(11,451)	$ 20,704

Nine Months Ended September 30,	**Automotive**	**Medical**	**Corporate**	**Total**
2022				
Product revenues	$ 829,570	$ 31,764	$ —	$ 861,334
Depreciation and amortization	27,333	2,224	913	$ 30,470
Operating income (loss)	98,367	(3,264)	(50,356)	$ 44,747
2021				
Product revenues	$ 767,503	$ 30,421	$ —	$ 797,924
Depreciation and amortization	26,923	1,818	689	$ 29,430
Operating income (loss)	129,788	(1,392)	(35,271)	$ 93,125

Automotive and Medical segment product revenues by product category for the three and nine months ended September 30, 2022 and 2021 were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Climate Control Seat	$ 112,059	$ 89,991	$ 311,281	$ 297,393
Seat Heaters	75,568	61,516	210,367	208,101
Steering Wheel Heaters	31,482	24,578	89,169	80,139
Automotive Cables	18,338	19,465	59,662	66,686
Battery Performance Solutions	20,331	16,928	55,395	52,265
Electronics	12,083	11,567	33,190	41,324
Lumbar and Massage Comfort Solutions [(a)]	22,740	—	22,740	—
Valve System Technologies [(a)]	18,542	—	18,542	—
Other Automotive	11,412	8,983	29,224	21,595
Subtotal Automotive segment	322,555	233,028	829,570	767,503
Medical segment [(a)]	10,407	10,356	31,764	30,421
Total Company	$ 332,962	$ 243,384	$ 861,334	$ 797,924

(a) Includes product revenues from acquisitions since their respective acquisition dates (see Note 3).

Total product revenues information by geographic area for the three and nine months ended September 30, 2022 and 2021 is as follows (based on shipment destination):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
United States	$ 131,021	$ 96,683	$ 337,759	$ 314,144
China	57,439	32,198	127,183	99,570
South Korea	22,751	20,894	67,632	71,050
Germany	19,454	16,011	54,805	51,541
Japan	17,603	17,054	42,305	52,607
Romania	11,592	10,850	35,866	40,801
Czech Republic	13,247	7,650	35,630	33,460
Finland	9,757	7,866	26,244	21,780
Slovakia	8,109	6,294	25,755	23,655
Canada	5,093	4,704	17,047	14,403
Other	36,896	23,180	91,108	74,913
Total Non-U.S.	201,941	146,701	523,575	483,780
Total Company	$ 332,962	$ 243,384	$ 861,334	$ 797,924

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This Quarterly Report on Form 10-Q (this "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 impact of the COVID-19 pandemic on our financial statements, liquidity, and business as well as the global economy, global supply chain and automotive and medical industries, the impact of sustained price increases for various material components and shipping costs, the impact of the conflict in Ukraine on our operations, the expected synergies and growth prospects following the closing of recent acquisitions, the significant supply disruptions and shifts in the labor market currently faced by the automotive and medical industries, our ability and our customers' ability to maintain production levels, the amount of borrowing availability under the Second Amended and Restated Credit Agreement and 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 this "Item 2. 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 Report are made as of the date hereof or as of the date specified herein and are based on management's current expectations and beliefs. Such statements are subject to a number of assumptions, risks, uncertainties and other factors, which are set forth in "Item 1A. Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2021, as amended by Part II "Item 1A. Risk Factors" in our Quarterly Report on Form 10-Q for the three months ended March 31, 2022 and subsequent reports filed with the Securities and Exchange Commission, and which could cause actual results to differ materially from that described in the forward-looking statements. In addition, except for the recently consummated acquisitions, such forward-looking statements do not include the potential impact of any other business combinations, acquisitions, divestitures, strategic investments and other significant 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.

The following discussion and analysis should be read in conjunction with, and is qualified in its entirety by, our consolidated condensed financial statements and related notes thereto included elsewhere in this Report and our consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2021.

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 to create 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. The Company is also developing a number of new technologies and products that are expected to enable improvements to existing products and to create new product applications for existing and new markets.

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 macro-economic 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 and would have an adverse effect on our business, results of operations and financial condition. In 2020 and 2021, and continuing into 2022, 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 with 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, weakness or accelerated growth 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 also 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 Economic Conditions

The COVID-19 pandemic that began around December 2019 introduced significant volatility to the global economy, disrupted supply chains and had a widespread adverse effect on the global automotive industry in the first half of 2020, with various direct and indirect adverse impacts continuing throughout 2021 and into 2022.

Beginning in February 2020 and continuing into June 2020, substantially all of the Company’s major OEM and Tier 1 customers temporarily ceased or significantly reduced production as a result of restrictions that were requested or mandated by governmental authorities. As a result, substantially all of our manufacturing facilities either temporarily suspended production or experienced significant reductions in volumes during this period. By the end of the second quarter of 2020, the Company had reopened all of its manufacturing facilities, in line with industry demand, and in accordance with local government requirements. Although global automotive industry production has improved relative to the first half of 2020, production remains below recent historic levels.

The lingering impacts of COVID-19 throughout 2021 and into 2022 have impeded global supply chains, 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 throughout 2021 and into 2022. We expect these inflationary impacts to continue for the foreseeable future.

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 was able to mitigate the impacts of supply chain disruptions in order to satisfy customer orders during the first three quarters of 2021; however, during the fourth quarter of 2021 and continuing into 2022 we have experienced and may continue to experience direct adverse impacts of ongoing shortages of semiconductors. Our ability to meet customer orders without significant delay and/or expense for the remainder of 2022 and beyond remains subject to significant uncertainty.

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.

In addition to the direct and indirect impacts of COVID-19, 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 of Ukraine near the Hungary border. In 2021, products manufactured at our Ukraine facility represented approximately 11% of the Company’s total revenue, including automotive cables, seat heaters and steering wheel heaters. At this time, our Ukraine facility is operating and we are in process of executing contingency plans and, in coordination with certain customers, specific equipment and production relocations leveraging our flexible global manufacturing footprint. Our response to the escalating situation 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.

Acquisitions

On July 29, 2022, the Company transferred consideration to acquire 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 $164.9 million. On the closing date, the Company made cash payments of approximately $188.9 million, net of cash acquired. We expect to receive cash from the seller of $24.1 million (“Purchase Consideration Receivable”) in connection with the finalization and settlement of post-closing adjustments in accordance with the purchase agreement. Substantially all of the adjustments known as of this filing relate to lower cash on hand as of the closing date than estimated and a pre-closing reorganization transaction. We expect additional adjustments for actual working capital, cash and cash-like items and debt and debt-like items as of the closing date. All post-closing adjustments are expected to be finalized within 120 days of the closing date, provided there are no disputes. Potential disputes shall be resolved in accordance with the purchase agreement. The Purchase Consideration Receivable is recorded in Other current assets in the consolidated condensed balance sheets as of September 30, 2022.

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. (“IOB”). 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.

See Note 3, “Acquisitions” of the consolidated condensed financial statements included in this Report for additional information.

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 (October 2022 release), actual light vehicle production in the three and nine months ended September 30, 2022 in the Company's key markets of North America, Europe, China, Japan and Korea, as compared to the three and nine months ended September 30, 2021, are shown below (in millions of units):

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	**2021**	**% Change**	**2022**	**2021**	**% Change**
North America	3.7	3.0	24.2 %	10.8	9.8	10.6 %
Europe	3.6	3.0	20.3 %	11.5	11.9	(3.3)%
Greater China	7.2	5.5	31.2 %	19.0	17.2	10.9 %
Japan / South Korea	2.8	2.3	22.0 %	8.0	8.1	(0.8)%
Total light vehicle production volume in key markets	17.3	13.7	25.8 %	49.3	46.9	5.1 %

The S&P Global Mobility (October 2022 release) forecasted light vehicle production volume in the Company's key markets for full year 2022 to increase to 67.6 million units, a 4.5% increase from full year 2021 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 may be significantly different from period to period due to changes in macroeconomic conditions or matters specific to the automotive industry, such as the fluctuations that occurred in 2020 and remain ongoing due to the direct and indirect impacts of the COVID-19 pandemic. 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 the third quarter of 2022, we secured new automotive business awards totaling $430 million in the quarter. 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 September 30, 2022, the date of this 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 the third quarter 2022 also do not reflect, in particular, the impact of the COVID-19 pandemic and related macroeconomic challenges on future business. Revenues resulting from automotive new business awards also are subject to additional risks and uncertainties that are included in this Report or incorporated by reference in "Forward-Looking Statements" above.

Stock Repurchase Program

On December 11, 2020, the Board of Directors authorized a new 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 $150.0 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. During the nine months ended September 30, 2022, we did not make any repurchases under the 2020 Stock Repurchase Program and have a remaining repurchase authorization of $130.0 million as of September 30, 2022.

Reportable Segments

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

See Note 15, "Segment Reporting", to the consolidated condensed financial statements included in this Report for a description of our reportable segments as well as their proportional contribution to the Company's reported product revenues and operating income (loss). The financial information used by our chief operating decision maker to assess operating performance and allocate resources is based on these reportable segments.

Consolidated Results of Operations

The results of operations for the three and nine months ended September 30, 2022 and 2021, in thousands, were as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)	2022	2021	Favorable / (Unfavorable)
Product revenues	$ 332,962	$ 243,384	$ 89,578	$ 861,334	$ 797,924	$ 63,410
Cost of sales	252,610	173,997	(78,613)	657,492	561,655	(95,837)
Gross margin	80,352	69,387	10,965	203,842	236,269	(32,427)
Operating expenses:						
Net research and development expenses	22,666	20,590	(2,076)	62,425	56,420	(6,005)
Selling, general and administrative expenses	34,859	27,344	(7,515)	96,109	83,093	(13,016)
Restructuring expenses	6	749	743	561	3,631	3,070
Total operating expenses	57,531	48,683	(8,848)	159,095	143,144	(15,951)
Operating income	22,821	20,704	2,117	44,747	93,125	(48,378)
Interest income (expense), net	714	(515)	1,229	(1,285)	(2,184)	899
Foreign currency (loss) gain	(8,285)	133	(8,418)	(1,516)	391	(1,907)
Other income	361	10	351	698	13	685
Earnings before income tax	15,611	20,332	(4,721)	42,644	91,345	(48,701)
Income tax expense	5,784	4,646	(1,138)	13,998	17,959	3,961
Net income	$ 9,827	$ 15,686	$ (5,859)	$ 28,646	$ 73,386	$ (44,740)

Product revenues by product category, in thousands, for the three and nine months ended September 30, 2022 and 2021, were as follows:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2022	2021	% Change	$ Change	2022	2021	% Change	$ Change
Climate Control Seat	$ 112,059	$ 89,991	24.5 %	$ 22,068	$ 311,281	$ 297,393	4.7 %	$ 13,888
Seat Heaters	75,568	61,516	22.8 %	14,052	210,367	208,101	1.1 %	2,266
Steering Wheel Heaters	31,482	24,578	28.1 %	6,904	89,169	80,139	11.3 %	9,030
Automotive Cables	18,338	19,465	(5.8)%	(1,127)	59,662	66,686	(10.5)%	(7,024)
Battery Performance Solutions	20,331	16,928	20.1 %	3,403	55,395	52,265	6.0 %	3,130
Electronics	12,083	11,567	4.5 %	516	33,190	41,324	(19.7)%	(8,134)
Lumbar and Massage Comfort Solutions [a]	22,740	—	100.0 %	22,740	22,740	—	100.0 %	22,740
Valve System Technologies [a]	18,542	—	100.0 %	18,542	18,542	—	100.0 %	18,542
Other Automotive	11,412	8,983	27.0 %	2,429	29,224	21,595	35.3 %	7,629
Subtotal Automotive segment	322,555	233,028	38.4 %	89,527	829,570	767,503	8.1 %	62,067
Medical segment [a]	10,407	10,356	0.5 %	51	31,764	30,421	4.4 %	1,343
Total Company	$ 332,962	$ 243,384	36.8 %	$ 89,578	$ 861,334	$ 797,924	7.9 %	$ 63,410

(a) Includes product revenues from acquisitions since their respective acquisition dates (see Note 3).

Product Revenues

Below is a summary of our product revenues, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	FX	Acquisition	Pricing/Other	Total
Product revenues	$ 332,962	$ 243,384	$ 89,578	$ 67,998	$ (18,438)	$ 42,515	$ (2,497)	$ 89,578

Product revenues for the three months ended September 30, 2022 increased 36.8% as compared to the three months ended September 30, 2021. The increase in product revenues is related to increased volumes in our Automotive segment and the inclusion of sales from Alfmeier and Dacheng since the acquisitions. These increases were partially offset by unfavorable foreign currency impacts, primarily related to the Euro, Chinese Renminbi and Korean Won. The decrease in product revenues included in Variance Due To Pricing/Other is primarily attributable to decreases in customer pricing in our Automotive segment and a decrease in product revenues in our legacy Medical business. Automotive customer pricing was impacted by negotiated lower annual price reductions and cost recoveries from customers.

Below is a summary of our product revenues, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	FX	Acquisition	Pricing/Other	Total
Product revenues	$ 861,334	$ 797,924	$ 63,410	$ 59,416	$ (38,608)	$ 42,515	$ 87	$ 63,410

Product revenues for the nine months ended September 30, 2022 increased 7.9% as compared to the nine months ended September 30, 2021. The increase in product revenues is primarily related to increased volumes in our Automotive segment and the inclusion of sales from Alfmeier and Dacheng since the acquisitions. These increases were partially offset by unfavorable foreign currency impacts, primarily related to the Euro, Chinese Renminbi and Korean Won. Automotive customer pricing was flat as a result of negotiated lower annual price reductions and cost recoveries from customers.

Cost of Sales

Below is a summary of our cost of sales and gross margin, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	Operational Performance	FX	Acquisitions and Other	Total
Cost of sales	$ 252,610	$ 173,997	$ (78,613)	$ (42,162)	$ (4,237)	$ 11,326	$ (43,540)	$ (78,613)
Gross margin	$ 80,352	$ 69,387	$ 10,965	$ 25,836	$ (8,553)	$ (7,112)	$ 794	$ 10,965
Gross margin - Percentage of product revenues	24.1 %	28.5 %						

Cost of sales for the three months ended September 30, 2022 increased 45.2% as compared to the three months ended September 30, 2021. The increase in cost of sales is due to increased volumes in our Automotive segment, the inclusion of sales from Alfmeier and Dacheng since the acquisitions and inflation associated with wages, higher freight costs and material costs. These increases were partially offset by favorable foreign currency impacts primarily attributable to the Euro and Chinese Renminbi.

Below is a summary of our cost of sales and gross margin, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,			Variance Due To:				
	2022	2021	Favorable / (Unfavorable)	Automotive Volume	Operational Performance	FX	Acquisitions and Other	Total
Cost of sales	$ 657,492	$ 561,655	$ (95,837)	$ (36,541)	$ (30,036)	$ 22,523	$ (51,783)	$ (95,837)
Gross margin	$ 203,842	$ 236,269	$ (32,427)	$ 22,875	$ (34,033)	$ (16,085)	$ (5,184)	$ (32,427)
Gross margin - Percentage of product revenues	23.7 %	29.6 %						

Cost of sales for the nine months ended September 30, 2022 increased 17.1% as compared to the nine months ended September 30, 2021. The increase in cost of sales is due to increased volumes in our Automotive segment, the inclusion of sales from Alfmeier and Dacheng since the acquisitions and inflation associated with higher freight costs and material costs. 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 three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Research and development expenses	$ 26,841	$ 23,883	$ (2,958)
Reimbursed research and development expenses	(4,175)	(3,293)	882
Net research and development expenses	$ 22,666	$ 20,590	$ (2,076)
Percentage of product revenues	6.8 %	8.5 %	

Net research and development expenses for the three months ended September 30, 2022 increased 10.1% as compared to the three months ended September 30, 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.

Below is a summary of our net research and development expenses, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Research and development expenses	$ 75,077	$ 69,322	$ (5,755)
Reimbursed research and development expenses	(12,652)	(12,902)	(250)
Net research and development expenses	$ 62,425	$ 56,420	$ (6,005)
Percentage of product revenues	7.2 %	7.1 %	

Net research and development expenses for the nine months ended September 30, 2022 increased 10.6% as compared to the nine months ended September 30, 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 three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Selling, general and administrative expenses	$ 34,859	$ 27,344	$ (7,515)
Percentage of product revenues	10.5%	11.2%	

Selling, general and administrative expenses for the three months ended September 30, 2022 increased 27.5% as compared to the three months ended September 30, 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, partly offset by lower incentive compensation.

Below is a summary of our selling, general and administrative expenses, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Selling, general and administrative expenses	$ 96,109	$ 83,093	$ (13,016)
Percentage of product revenues	11.2%	10.4%	

Selling, general and administrative expenses for the nine months ended September 30, 2022 increased 15.7% as compared to the nine months ended September 30, 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, partly offset by lower incentive compensation.

Restructuring Expenses

Restructuring expenses primarily relate to the Manufacturing Footprint Rationalization restructuring program and other discrete restructuring actions focused on the rotation of our manufacturing footprint to lower cost locations and the reduction of global overhead expenses.

Below is a summary of our restructuring expenses, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Restructuring expenses	$ 6	$ 749	$ 743

During the three months ended September 30, 2022, the Company recognized expenses of less than $0.1 million for other costs.

During the three months ended September 30, 2021, the Company recognized expenses of $0.1 million for employee separation costs and $0.6 million of other costs.

Below is a summary of our restructuring expenses, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Restructuring expenses	$ 561	$ 3,631	$ 3,070

During the nine months ended September 30, 2022, the Company recognized expenses of less than $0.1 million for employee separation costs and $0.5 million for other costs.

During the nine months ended September 30, 2021, the Company recognized expenses of $2.7 million for employee separation costs and $0.8 million of accelerated depreciation and other costs.

See Note 4, "Restructuring" of the consolidated condensed financial statements included in this Report for additional information.

Interest Income (Expense), net

Below is a summary of our interest income (expense), net, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Interest income (expense), net	$ 714	$ (515)	$ 1,229

Interest income (expense), net for the three months ended September 30, 2022 decreased 238.6% as compared to the three months ended September 30, 2021. The decrease is primarily due to the change in fair value of the interest rate swap derivative during the three months ended September 30, 2022, partially offset by increased interest from a higher balance on our revolving credit agreement during the three months ended September 30, 2022, as compared to the three months ended September 30, 2021.

Below is a summary of our interest income (expense), net, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Interest income (expense), net	$ (1,285)	$ (2,184)	$ 899

Interest income (expense), net for the nine months ended September 30, 2022 decreased 41.2% as compared to the nine months ended September 30, 2021. The decrease is primarily due to the change in fair value of the interest rate swap derivative during the nine months ended September 30, 2022, partially offset by increased interest from a higher balance on our revolving credit agreement during the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021.

Foreign Currency (Loss) Gain

Below is a summary of our foreign currency gain (loss), in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Foreign currency (loss) gain	$ (8,285)	$ 133	$ (8,418)

Foreign currency (loss) gain for the three months ended September 30, 2022 included net realized foreign currency loss of $3.0 million and net unrealized foreign currency loss of $5.3 million.

Foreign currency (loss) gain for the three months ended September 30, 2021 primarily included net realized foreign currency loss of $0.9 million and net unrealized foreign currency gain of $1.0 million

Below is a summary of our foreign currency gain, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Foreign currency (loss) gain	$ (1,516)	$ 391	$ (1,907)

Foreign currency (loss) gain for the nine months ended September 30, 2022 included net realized foreign currency loss of $2.6 million and net unrealized foreign currency gain of $1.1 million.

Foreign currency (loss) gain for the nine months ended September 30, 2021 primarily included net realized foreign currency loss of $0.9 million and net unrealized foreign currency gain of $1.3 million.

Other Income

Below is a summary of our other income, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Other income	$ 361	$ 10	$ 351

The increase in other income is due to an increase in miscellaneous income.

Below is a summary of our other income, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Other income	$ 698	$ 13	$ 685

The increase in other income is due to an increase in miscellaneous income.

Income Tax Expense

Below is a summary of our income tax expense, in thousands, for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Income tax expense	$ 5,784	$ 4,646	$ (1,138)

Income tax expense was $5.8 million for the three months ended September 30, 2022, on earnings before income tax of $15.6 million, representing an effective tax rate of 37.1%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, the unfavorable impact of the global intangible low-tax income ("GILTI"), and the quarterly accrual for uncertain tax positions, partially offset by the impact of certain favorable tax effects on equity vesting.

Income tax expense was $4.6 million for the three months ended September 30, 2021 on earnings before income tax of $20.3 million representing an effective tax rate of 22.9%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to the unfavorable impact of quarterly accrual for uncertain tax positions, GILTI, withholding taxes and other non-deductible expenses, partially offset by the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate in the third quarter of 2021.

Below is a summary of our income tax expense, in thousands, for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Favorable / (Unfavorable)
Income tax expense	$ 13,998	$ 17,959	$ 3,961

Income tax expense was $14.0 million for the nine months ended September 30, 2022, on earnings before income tax of $42.6 million, representing an effective tax rate of 32.8%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, the unfavorable impact of GILTI, and the quarterly accrual for uncertain tax positions, partially offset by the impact of certain favorable tax effects of equity vesting.

Income tax expense was $18.0 million for the nine months ended September 30, 2021 on earnings before income tax of $91.3 million representing an effective tax rate of 19.7%. The effective tax rate differed from the U.S. Federal statutory rate of 21.0% primarily due to certain favorable tax effect on equity vesting, intercompany transactions in 2021 and the impact of income taxes on foreign earnings taxed at rates varying from the U.S. statutory rate, partially offset by the unfavorable impact of uncertain tax positions, GILTI, withholding taxes and other non-deductible expenses.

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 September 30, 2022, the Company had $139.2 million of cash and cash equivalents, $264.5 million of availability under our Second Amended and Restated Credit Agreement and $38.0 million of availability under our receivables factoring arrangements. Significant changes in 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 continue to maintain access to the capital markets and may issue debt or equity securities, which may provide an additional source of liquidity. 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 September 30, 2022, the Company’s cash and cash equivalents held by our non-U.S. subsidiaries totaled approximately $117.8 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 and receivables factoring arrangements will be adequate to meet anticipated cash requirements for at least the next twelve months and the foreseeable future.

Cash and Cash Flows

The following table represents our cash and cash equivalents, in thousands:

	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Cash and cash equivalents at beginning of period	$ 190,606	$ 268,345
Net Cash provided by operating activities	12,957	117,106
Net Cash used in investing activities	(247,841)	(39,958)
Net Cash provided by (used in) financing activities	191,582	(148,586)
Foreign currency effect on cash and cash equivalents	(8,141)	(1,821)
Cash and cash equivalents at end of period	$ 139,163	$ 195,086

Cash Flows From Operating Activities

Cash provided by operating activities totaled $13.0 million during the nine months ended September 30, 2022 primarily reflecting net income of $28.6 million and $35.3 million for non-cash charges for depreciation, amortization, non-cash stock based compensation, loss on disposition of property and equipment and pension plan adjustments, partially offset by non-cash adjustments of $1.8 million for gains on revaluation of derivatives, $1.2 million for deferred income taxes and $47.9 million related to changes in assets and liabilities.

Cash Flows From Investing Activities

Cash used in investing activities was $247.8 million during the nine months ended September 30, 2022, reflecting payments for the Alfmeier and Dacheng acquisitions of $224.1 million and purchases of property and equipment of $25.7 million, partially offset by proceeds from deferred purchase price of factored receivables of $2.2 million and the sale of property and equipment of $0.2 million.

Cash Flows From Financing Activities

Cash provided by financing activities was $191.6 million during the nine months ended September 30, 2022, reflecting net borrowings of debt of $195.4 million and proceeds from the exercise of Common Stock options totaling $1.6 million, partially offset by taxes withheld and paid on employees' share based payment awards totaling $5.4 million.

Debt

The following table summarizes the Company's debt, in thousands, as of September 30, 2022 and 2021:

	September 30, 2022		September 30, 2021	
	Interest Rate	Principal Balance	Interest Rate	Principal Balance
Credit Agreement:				
U.S. Revolving Note (U.S. Dollar denominations)	4.26%	$ 232,000	1.35%	$ 35,000
Other loans	3.93% - 5.21%	3,540	5.21%	5,000
Total debt		235,540		40,000
Current maturities		(3,540)		(2,500)
Long-term debt, less current maturities		$ 232,000		$ 37,500

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.

DEG Vietnam Loan

The Company also has a fixed interest rate loan with the German Investment Corporation (“DEG”), a subsidiary of KfW Banking Group, a Germany government-owned development bank. The fixed interest rate senior loan agreement with DEG was used to finance the construction and set up of the Vietnam production facility (“DEG Vietnam Loan”). The DEG Vietnam Loan is subject to semi-annual principal payments that began November, 2017 and will end May, 2023.

Other Sources of Liquidity

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. As of September 30, 2022, there were $20.2 million outstanding receivables transferred under the receivable factoring agreements and our availability under the receivables factoring agreements was $38.0 million.

Material Cash Requirements

Significant liquidity was required during July 2022 to close the Alfmeier and Dacheng acquisitions. In connection with these acquisitions, we drew $202.0 million from the U.S. Revolving Note and made cash payments totaling approximately $224.1 million, including amounts placed in escrow. Additional cash payments may be required for contingent payments of up to $3.0 million related to the Dacheng acquisition. See "Acquisitions" above for additional information about the purchase prices associated with these transactions.

The Company continues to enter into agreements with suppliers to reserve the right to purchase certain semiconductor chips over periods of 12-24 months. As of September 30, 2022, the Company’s total commitments for these semiconductor chip agreements was $37.3 million. See Note 8, “Commitments and Contingencies” of the consolidated condensed financial statements included in this Report for additional information.

Except as described above, there have been no material changes in our cash requirements since December 31, 2021, the end of fiscal year 2021. See Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2021 for additional information regarding our material cash requirements.

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, labor and transportation. These inflationary cost increases are expected to continue into 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 offset our future cost increases. Such inflationary cost increase may increase the cash required to fund our operations by a material amount.

Critical Accounting Policies

The discussion and analysis of our financial condition and results of operations are based upon our consolidated condensed financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. For discussion of our significant accounting policies, see Note 2, "Summary of Significant Accounting Policies," to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2021. There have been no significant changes in our critical accounting policies or critical accounting estimates during the three months ended September 30, 2022. We are not presently aware of any events or circumstances that would require us to update our estimates, assumptions or revise the carrying value of our assets or liabilities. Our estimates may change, however, as new events 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.

Recent Accounting Pronouncements

For information on the impact of recently issued accounting pronouncements, see Note 2, "New Accounting Pronouncements" in the consolidated condensed financial statements included in this Report.

ITEM 3. 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 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, 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 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 condensed 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 condensed 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 condensed statements of income. Cash flows associated with derivatives are reported in net cash (used in) provided by operating activities in the Company's consolidated condensed statements of cash flows.

Information related to the fair values of all derivative instruments in our consolidated condensed balance sheet as of September 30, 2022 is set forth in Note 10, "Financial Instruments" in the consolidated condensed 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. The information is presented in U.S. dollar equivalents, which is the Company's reporting currency. The instruments actual cash flows are denominated in the currency indicated in parentheses.

	Expected Maturity Date							
	2022	2023	2024	2025	2026	2027	Total	Fair Value
Liabilities								
Long-Term Debt:								
Variable rate ($USD)	$ —	$ —	$ —	$ —	$ —	$ 232,000	$ 232,000	$ 232,000
Variable interest rate as of September 30, 2022						4.26%	4.26%	
Fixed rate ($USD)	$ 1,271	$ 2,269	$ —	$ —	$ —	$ —	$ 3,540	$ 3,560
Fixed interest rate	3.93% -5.21%	3.93% -5.21%					3.93% -5.21%	

Based on the amounts outstanding as of September 30, 2022, a hypothetical 100 basis point change (increase or decrease) in interest rates would impact annual interest expense by $2.3 million.

In connection with the acquisitions of Alfmeier and Dacheng, we drew $202.0 million from the U.S. Revolving Note in July 2022. To hedge the Company's exposure to interest payment fluctuations on a portion of these 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 2022	2023	2024
USD Functional Currency			
Forward Exchange Agreements:			
(Receive $MXN / Pay $USD)			
Total contract amount	$ 6,977	$ 27,093	$ 12,970
Average contract rate	21.50	22.15	23.13

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	September 30, 2022 Potential loss in fair value	September 30, 2022 Potential gain in fair value	December 31, 2021 Potential loss in fair value	December 31, 2021 Potential gain in fair value
Forward Exchange Agreement:(Receive $MXN / Pay $USD)	$ 4,484	$ 5,481	$ 1,296	$ 1,584

The model assumes a parallel shift in currency exchange rates; however, currency exchange rates rarely move in the same direction. The assumption that currency exchange rates change in a parallel fashion may overstate the impact of changing currency exchange rates on assets and liabilities denominated in currencies other than the U.S. dollar.

ITEM 4. CONTROLS AND PROCEDURES

(a) 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 September 30, 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 September 30, 2022.

(b) Changes in Internal Control over Financial Reporting

In conjunction with our recent acquisition activity, we utilized our 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.

Our acquisition of Dacheng became effective on July 13, 2022 and the acquisition of Alfmeier became effective on July 29, 2022. We are currently integrating policies, processes and operations for the combined companies and will continue to evaluate our internal control over financial reporting as we develop and execute our integration plans. We will exclude the acquired operations of Dacheng and Alfmeier from our assessment of Gentherm’s internal control over financial reporting for the year ended December 31, 2022 as permissible under rules and regulations of the Securities and Exchange Commission.

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 September 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are subject to litigation from time to time in the ordinary course of business, however there is no material pending litigation to which we are a party and no material legal proceeding was terminated, settled or otherwise resolved during the three months ended September 30, 2022.

ITEM 1A. RISK FACTORS

The Company's risk factors have not materially changed from those previously disclosed in Part 1, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021, as amended by Part II "Item 1A. Risk Factors" in our Quarterly Report on Form 10-Q for the three months ended March 31, 2022.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities During First 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 Plans or Programs (1)
July 1, 2022 to July 31, 2022	—	$ —	—	$ 130,000,105
August 1, 2022 to August 31, 2022	—	$ —	—	$ 130,000,105
September 1, 2022 to September 30, 2022	—	$ —	—	$ 130,000,105

(1) On December 11, 2020, the Board of Directors authorized a new 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 $150.0 million of its issued and outstanding common stock over a three-year period, expiring December 15, 2023. The authorization of this stock repurchase program does not require that the Company repurchase any specific dollar value or number of shares and may be modified, extended or terminated by the Company's Board of Directors at any time.

ITEM 6. EXHIBITS

Exhibits to this Report are as follows:

Exhibit Number	Exhibit Description	Filed /Furnished Herewith	Incorporated by Reference: Form	Period Ending	Exhibit / Appendix Number	Filing Date
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
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 Data File (embedded within the Inline XBRL document contained in Exhibit 101)	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. A list of the omitted schedules and exhibits to Exhibit 10.1 is set forth in the agreement. A list of the omitted schedules and exhibits to Exhibit 10.2 is as follows: Schedule I – Pledged Equity Interests; Schedule II – Primary Location, Filing Locations, Trade Names, Changes in Names, State Organizational Numbers, Taxpayer Identification Numbers, Government Contracts, Deposit Accounts, Securities Accounts, Commodity Accounts, Letter of Credit Rights and Commercial Tort Claims; Schedule III – Intellectual Property; Annex I – Security Agreement Supplement.

** Documents are furnished not filed.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Gentherm Incorporated

/s/ Phillip Eyler

Phillip Eyler
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 3, 2022

/s/ Matteo Anversa

Matteo Anversa
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Date: November 3, 2022

Exhibit 31.1

CERTIFICATION

I, Phillip Eyler, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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 and Chief Executive Officer
November 3, 2022

Exhibit 31.2

CERTIFICATION

I, Matteo Anversa, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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
November 3, 2022

Exhibit 32.1

**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 Quarterly Report of Gentherm Incorporated (the “Company”) on Form 10-Q for the period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Phillip Eyler, President and 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 results of operations of the Company.

/s/ Phillip Eyler
Phillip Eyler
President and Chief Executive Officer
November 3, 2022

Exhibit 32.2

**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 Quarterly Report of Gentherm Incorporated (the “Company”) on Form 10-Q for the period ended September 30, 2022 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 results of operations of the Company.

/s/ Matteo Anversa
Matteo Anversa
Executive Vice President, Chief Financial Officer and Treasurer
November 3, 2022