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

FORM 10-K

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

For fiscal year ended December 31, 2022

Commission File Number: 1-4018

Dover Corporation

(Exact name of registrant as specified in its charter)

Delaware 53-0257888

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

3005 Highland Parkway Downers Grove, Illinois 60515

(Address of principal executive offices)

Registrant's telephone number: (630) 541-1540

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

Title of Each Class	<u>Trading Symbol(s)</u>	Name of Each Exchange on Which Registered
Common Stock, par value \$1	DOV	New York Stock Exchange
1.250% Notes due 2026	DOV 26	New York Stock Exchange
0.750% Notes due 2027	DOV 27	New York Stock Exchange

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

None

	TORE		
Indicate by check mark if the registrant is a well-known sea	asoned issuer, as defined in Rule 405	of the Securities Act. Yes ☑ No	о 🗆
Indicate by check mark if the registrant is not required to fil	ile reports pursuant to Section 13 or S	Section 15(d) of the Act. Yes □	No ☑
Indicate by check mark whether the registrant (1) has filed a Act of 1934 during the preceding 12 months (or for such sheen subject to such filing requirements for the past 90 days	norter period that the registrant was re	. ,	_
Indicate by check mark whether the registrant has submitted Rule 405 of Regulation S-T (§ 232.405 of this chapter) duri required to submit such files.) Yes ☑ No □	3 3		
Indicate by check mark whether the registrant is a large acc an emerging growth company. See the definitions of "large "emerging growth company" in Rule 12b-2 of the Exchange	accelerated filer," "accelerated filer,	, ,	•
Large accelerated filer ✓ Accelerated filer ☐	Non-accelerated filer □	Smaller reporting company	
		Emerging growth company	
If an emerging growth company, indicate by check mar complying with any new or revised financial accounting sta	_	<u> </u>	eriod for

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act by the registered public accounting firm that prepared or issued its audit report. Yes \boxtimes No \square
If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. \Box
Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to $\S240.10D-1(b)$. \square
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes □ No ☑

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of the close of business on June 30, 2022 was \$17,347,519,018. The registrant's closing price as reported on the New York Stock Exchange-Composite Transactions for June 30, 2022 was \$121.32 per share. The number of outstanding shares of the registrant's common stock as of January 31, 2023 was 139,713,200.

Documents Incorporated by Reference: Part III — Certain Portions of the Proxy Statement for Annual Meeting of Shareholders to be held on May 5, 2023 (the "2023 Proxy Statement").

Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K, especially "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. All statements in this document other than statements of historical fact are statements that are, or could be deemed, "forward-looking" statements. Some of these statements may be indicated by words such as "may", "anticipate", "expect", "believe", "intend", "continue", "guidance", "estimates", "suggest", "will", "plan", "should", "would", "could", "forecast" and other words and terms that use the future tense or have a similar meaning. Forward-looking statements are based on current expectations and are subject to numerous important risks, uncertainties, and assumptions, including those described in Item 1A, "Risk Factors" in this Annual Report on Form 10-K. Factors that could cause actual results to differ materially from current expectations include, among other things: general economic conditions and conditions in the particular markets in which we operate; supply chain constraints and labor shortages that could result in production stoppages, inflation in material input costs and freight logistics; the impacts of COVID-19 or other future pandemics on the global economy and on our customers, suppliers, employees, business and cash flows; changes in customer demand and capital spending; competitive factors and pricing pressures; our ability to develop and launch new products in a cost-effective manner; changes in law, including the effect of tax laws and developments with respect to trade policy and tariffs; our ability to identify and complete acquisitions and integrate and realize synergies from newly acquired businesses; the impact of interest rate and currency exchange rate fluctuations; capital allocation plans and changes in those plans, including with respect to dividends, share repurchases, investments in research and development, capital expenditures and acquisitions; our ability to derive expected benefits from restructurings, productivity initiatives and other cost reduction actions; the impact of legal compliance risks and litigation, including with respect to product quality and safety, cybersecurity and privacy; and our ability to capture and protect intellectual property rights. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

In this Annual Report on Form 10-K, we refer to measures used by management to evaluate performance, including a number of financial measures that are not defined under accounting principles generally accepted in the United States of America ("GAAP"). We include reconciliations to provide more details on the use and derivation of these financial measures. Please see "Non-GAAP Disclosures" at the end of Item 7 for further detail.

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PART I

ITEM 1. BUSINESS

Overview

Dover Corporation is a diversified global manufacturer and solutions provider delivering innovative equipment and components, consumable supplies, aftermarket parts, software and digital solutions and support services through five operating segments: Engineered Products, Clean Energy & Fueling, Imaging & Identification, Pumps & Process Solutions, and Climate & Sustainability Technologies. Unless the context indicates otherwise, references herein to "Dover," "the Company," and words such as "we," "us," or "our" include Dover Corporation and its consolidated subsidiaries. Dover was incorporated in 1947 in the State of Delaware and became a publicly traded company in 1955. Dover is headquartered in Downers Grove, Illinois and currently employs over 25,000 people worldwide.

Dover's five segments are structured around businesses with similar business models, go-to-market strategies and manufacturing practices. This structure enables management efficiency, aligns Dover's operations with its strategic initiatives and capital allocation priorities, and provides transparency about our performance to external stakeholders. Dover's five operating and reportable segments are as follows:

- Our Engineered Products segment provides a wide range of equipment, components, software, solutions and services to the vehicle aftermarket, waste handling, industrial automation, aerospace and defense, industrial winch and hoist, and fluid dispensing end-markets.
- Our Clean Energy & Fueling segment provides components, equipment, software, solutions and services enabling
 safe and reliable storage, transport and dispensing of traditional and clean fuels (including liquefied natural gas,
 hydrogen, and electric vehicle charging), cryogenic gases, and other hazardous substances along the supply chain,
 and safe and efficient operation of convenience retail, retail fueling and vehicle wash establishments, as well as
 facilities where cryogenic gases are produced, stored or consumed.
- Our Imaging & Identification segment supplies precision marking and coding, product traceability, brand protection
 and digital textile printing equipment, as well as related consumables, software and services to the global packaged
 and consumer goods, pharmaceutical, industrial manufacturing, textile and other end-markets.
- Our Pumps & Process Solutions segment manufactures specialty pumps and flow meters, highly engineered
 precision components for rotating and reciprocating machines, fluid connecting solutions and plastics and polymer
 processing equipment, serving single-use biopharmaceutical production, diversified industrial manufacturing,
 chemical production, plastics and polymer processing, midstream and downstream oil and gas and other endmarkets.
- Our Climate & Sustainability Technologies segment is a provider of innovative and energy-efficient equipment, components and parts for the commercial refrigeration, equipment and systems, heating and cooling and beverage can-making equipment markets.

COVID-19

For information related to the impact of the COVID-19 pandemic on our business see Item 7. Management's Discussion and Analysis in this Form 10-K.

Management Philosophy

Dover is committed to steady shareholder value creation through a combination of sustained long-term profitable growth, operational excellence, superior free cash flow generation and productive capital re-deployment while adhering to a conservative financial policy. Dover seeks to be a leader in a diverse set of growing markets where customers are loyal to trusted partners and suppliers, and value product performance and differentiation driven by superior engineering, manufacturing precision, total solution development and excellent supply chain performance. Our businesses are long-time leaders in their respective markets and are known for their innovation, engineering capability and customer service excellence. We aim to continue growing our businesses from this strong foundation.

Our operating structure of five business segments allows for differentiated acquisition focus consistent with our portfolio and capital allocation priorities. We believe our business segment structure, coupled with value-creating functional expertise at our lean corporate center, presents opportunities to identify and capture operating synergies, such as global sourcing and supply chain integration, centralized shared services, cross-pollination of manufacturing best practices, and further advances the development of our executive talent. Our executive management team sets strategic direction, initiatives and goals, develops effective incentive structures, provides oversight of strategy execution and achievement of these goals for our business segments, and with oversight from our Board of Directors, makes capital allocation decisions, including with respect to organic investment initiatives, major capital projects, acquisitions and the return of capital to our shareholders.

Our goal is to foster an operating culture with high ethical and performance standards that values accountability, rigor, trust, inclusion, respect and open communications, designed to allow individual growth and operational effectiveness. We are also increasing our focus on maintaining sustainable business practices that reduce environmental impact, and developing products that help our customers meet their sustainability goals.

Company Goals

We are committed to driving superior shareholder returns through three key tenets of our corporate strategy.

First, we are committed to achieving organic sales growth above that of gross domestic product (3% to 5% annually on average) over a long-term business cycle, absent prolonged adverse economic conditions, complemented by growth through strategic acquisitions.

Second, we continue to focus on improving returns on capital, as well as earnings margin by enhancing our operational capabilities and making investments across the organization in digital capabilities, automation, operations management, information technology ("IT"), shared services (including Dover Business Services and our India Innovation Center), and talent. We also focus on continuous, effective cost management and productivity initiatives, such as supply chain optimization, e-commerce and digital go-to-market, restructuring, improved footprint utilization, strategic pricing and portfolio management.

Third, we aim to generate strong and growing free cash flow and earnings per share through strong earnings performance, productivity improvements and active working capital management. Dover prioritizes deploying free cash flow towards high-return and high-confidence organic reinvestments aimed at growing, improving and strengthening our businesses, as well as through inorganic investments that synergistically enhance the quality of our portfolio. Dover's value creation strategy is supported by a financial policy that includes a prudent approach to financial leverage, and a disciplined approach to capital allocation that allows for a balance between reinvestment and return of capital to shareholders through growing dividends and opportunistic share repurchases.

We support achievement of these goals by (1) aligning management compensation with strategic and financial objectives, (2) actively managing our portfolio to increase enterprise scale, improve business mix over time to markets with secular growth characteristics, and pursue acquisitions that fit the characteristics of an ideal Dover business and (3) investing in talent development programs.

Characteristics of a Dover Business

For over 65 years, Dover has successfully and profitably operated a diversified portfolio of high-quality businesses serving a wide variety of industrial and business-to-business end markets incorporating businesses with different business models. We believe this diversity is a strength of our portfolio, providing Dover with multiple avenues for organic and inorganic growth, lower cyclicality, and the ability to extract synergies of common ownership. While we expect our portfolio to remain diversified, we also strive to shape the portfolio over time to increase common attractive attributes across our businesses. We see the following commonalities characterizing the majority of Dover businesses:

- Attractive markets: Our businesses generally operate in strategically attractive niche industrial markets with proven
 and well-understood long-term growth trends, favorable customer and supplier landscapes, mature and incrementally
 improving technologies with opportunities for technological differentiation, and highly loyal customers, suppliers or
 channel partners.
- <u>Leading Positions</u>: Our businesses are long-time leaders in their respective markets and have consistently enjoyed customer bases that choose products primarily based on their performance, track record, safety and compliance.
- <u>Component Businesses</u>: Many of our businesses produce critical components that represent a small portion of a larger system by cost. For example, our industrial and biopharma pumps, biopharma connectors, engineered bearings and compression components, marking and coding printers, clean energy components, and heat exchangers are all part of larger systems built or employed by our customers. Such components typically serve demanding applications where value-in-use and costs and risks of switching far exceed the cost of the component itself.
- Aftermarket Opportunity: Many of our businesses produce complex engineering equipment and systems that require a significant and predictable volume of parts and services over their life cycle. For example, our marking and coding, plastics and polymer processing equipment, aluminum can-making equipment, and refuse collection vehicles all derive a significant share of revenue and even larger share of profits from sale of consumables, parts and services into their large installed based. Recurring demand, which includes parts, consumables, services and software, represents approximately 31% of our revenue.
- <u>Attractive Financial Profile:</u> Dover businesses exhibit attractive financial profiles, characterized by predictable, stable revenue, low capital intensity, strong cash-flow and sustainable returns on invested capital well in excess of our cost of capital.

Business Strategy

Dover seeks to create value for shareholders by combining the global scale and capabilities, as well as access to capital, of a diversified industrial enterprise with the agility and entrepreneurial dynamism of niche manufacturing businesses. To achieve our stated goals, we are focused on executing the following pillars of Dover's business strategy:

Capturing growth potential in our end-markets and adjacent market segments

Dover's business segments are focused on building enduring competitive advantages and leadership positions in markets we believe are positioned for sustained future growth. We believe our businesses are among the top suppliers in most markets and niches we serve (as defined by customer applications, geographies or products), which positions us well to capture future growth. We capitalize on our engineering, technology and design expertise, and maintain an intense focus on meeting the needs of our customers and on adding significant, and often new, value to their operations through superior product performance, safety, reliability, and a commitment to aftermarket support. We cultivate and maintain an entrepreneurial culture to enable business agility, and continuously innovate to address our customers' needs, to help them win in the markets they serve.

In particular, our businesses are well-positioned to capitalize on: growing industrial manufacturing and trade volumes; adoption of digital technologies; increasing requirements for sustainability, safety, energy efficiency and consumer product safety; and growth of the middle class and consumption in emerging economies.

- Our Engineered Products segment is capitalizing on secular growth in waste generation and the increasing sophistication and automation of waste collection operations, increasing global car parc, average car age and annual miles driven, as well as increasing digitization and sensorization of modern vehicles.
- Our Clean Energy & Fueling segment benefits from the worldwide growth in environmental safety and compliance regulations, new infrastructure build-out in emerging economies, transition to clean energy products such as

- liquefied natural gas and hydrogen, growth in demand for cryogenic gases and electric vehicle charging, consolidation in the convenience retail sector, increased digitization of convenience stores and fuel retailing, as well as secular growth in automated vehicle wash systems and solutions (over manual and do-it-yourself washing).
- Our Imaging & Identification segment leverages its unique product offering containing equipment, consumables, software and services to address market needs and requirements, including conversion to digital textile printing, increased demand for product traceability and brand protection, and consumer product safety.
- Our Pumps & Process Solutions segment is focused on: capturing growth in its installed base; the growing sophistication of fluid transfer and rotating machinery components within the biopharma and hygienic markets; chemical, plastics and polymer, industrial, power generation, wind energy, and mid and downstream oil and gas; and globalizing brands across geographies while expanding sales channels and engineering support.
- Our Climate & Sustainability Technologies segment is responding to our customers' demand for increased energy
 efficiency and sustainability in food retail merchandising solutions, including refrigeration systems using CO²
 refrigerant, as well as increasing demand for sustainable heating and cooling solutions, including heat pumps, and
 growing global demand for aluminum beverage cans.

We aim to capture growth by making organic investments in capacity expansion, automation and productivity improvement, research and development, developing new products and technologies, improving digital capabilities and expanding our geographic coverage. We pursue a disciplined and strategic approach to acquisitions aiming to enhance the quality and attractiveness of our portfolio over time and position Dover for long-term growth. We evaluate acquisition opportunities across the portfolio where we see the greatest runway for value-creating inorganic capital deployment. We continually evaluate how our assets and capabilities can position us to grow in markets adjacent to our core businesses (for example, new applications, geographies, product segments or adjacent technologies) where we can be advantaged.

In addition to product innovation, we aim to capture growth by developing digital technologies. Our Boston-based Dover Digital Labs serves as the company-wide hub for our digital initiative. We have continued to invest in this facility and our team of software developers, data scientists, and product managers to enhance our digital capabilities. The Digital Labs team is driving digital transformation across our businesses in four areas: (i) enhancing the customer experience through more efficient and streamlined digital customer interfaces that make it easy to do business with Dover companies; (ii) developing connected products, software and machine learning augmented solutions built to integrate into, and work with our core equipment and component offerings; (iii) driving increased efficiency, safety and quality in our manufacturing operations by employing cutting-edge automation through "connected factory" solutions; and (iv) security of digital products. We believe the Digital Labs' contributions in these areas enable us to add significant value to our products and to capture commercial growth opportunities. By leveraging a central resource for Industrial Internet of Things ("IIoT") and connected product initiatives, we are able to capture efficiencies in our digital transformation efforts, improve product security and offer better efficiency in software and sensor integration engineering to keep our projects cost-competitive.

Improving profitability and return on invested capital

We are committed to generating sustainable returns on invested capital well above the cost of capital across all of our businesses. We continually evaluate and pursue opportunities to improve efficiency, margin and return on capital. We are intensely focused on driving operational excellence across our businesses. We have implemented numerous productivity initiatives to maximize our efficiency, such as supply chain integration, shared services, lean manufacturing principles and production automation, as well as workplace safety initiatives to help ensure the health and welfare of our employees. Our businesses place a strong emphasis on continual product quality improvement and new product development to better serve customers and to facilitate expansion into new products and geographic markets.

We also focus on margin expansion initiatives designed to reduce our selling, general and administrative cost base and rationalize our manufacturing and supply chain footprint across the portfolio. We continually expand initiatives to extract productivity gains across the businesses and realize savings. Our margin expansion initiatives are focused on four core enterprise capabilities: (1) leverage our Digital Labs team to enhance our internal and market-facing digital capabilities, (2) improve utilization and optimization of our manufacturing footprint through centralized resources and investment, (3) further centralize shared services under Dover Business Services, and (4) invest in our India Innovation Center shared services.

Dover Digital. Our Dover Digital Labs consists of a team of approximately 150 software developers, data scientists and product managers who provide digital capabilities to enhance the customer experience, develop connected products, drive

automation and efficiency inside our factories through digital technologies and in our business processes and focusing on the security of our digital products. Our Dover Digital Labs team has built common platforms which are being deployed on customer facing applications to make it easier to discover, find, configure, buy and obtain products and services from Dover companies. It has also deployed shared IIoT capability such that many of Dover's products are remotely configurable and monitored, enabling our businesses to sell aftermarket parts and offer remote diagnostic services.

Dover Operational Excellence. In 2019, we began to coordinate and oversee operations management from the corporate center of excellence through a team composed of functional experts in operational optimization, lean manufacturing, automation, HSE (Health, Safety and Environment) and complex project management. This team works closely with our businesses to drive execution excellence in our operational processes, standards and measurement tools to identify, prioritize and monitor execution of operational improvement initiatives. With expertise in health and safety, supply chain management, lean operations, project management, and advanced manufacturing and automation, we continue to focus on initiatives to improve operational efficiency and enhance and solidify the continuous improvement programs embedded in our businesses' day-to-day operations.

Dover Business Services. We continue to invest in Dover Business Services shared service centers, consisting of a team of approximately 550 people, to provide important transactional and value-added services to our businesses. Our shared service model allows us to leverage scale across Dover, increase process efficiencies through technology and specialization, and reduce risk through centralized controls. Our shared service centers create value by freeing resources within our businesses that would otherwise be dedicated to transactional services and allowing them to focus on customers, markets and product excellence. We expect to continue driving efficiencies through Dover Business Services as we increase the level of service centralization across the portfolio.

India Innovation Center. Our India Innovation Center has a team of approximately 600 engineers and IT professionals that our businesses rely on to leverage for product engineering, digital solutions development, data and information management, research and development, and intellectual property services. The scale of this team allows our businesses to access resources with capabilities and expertise across many disciplines that would be more costly to them as stand-alone companies, and allows for concurrent engineering on time sensitive projects.

We have been steadily investing in the build out and deployment of the above four enterprise capabilities in the past several years, including investing over \$29 million in capital expenditures during 2019-2022, and significantly expanding the staff of experts and support personnel in key centers of excellence globally.

Disciplined capital allocation and continuous portfolio enhancement

We are focused on the most efficient allocation of capital to maximize returns on investment. To do this, we utilize organic reinvestment to grow and strengthen our existing businesses. We plan to make average annual investments in capital spending of 2% - 3% of revenue with a focus on internal projects designed to expand our market participation, develop new products and improve productivity. In addition, we seek to deploy capital in acquisitions in attractive growth areas across our five segments. Dover focuses primarily on bolt-on acquisitions, applying strict selection criteria of market attractiveness (including growth, market landscape, and performance-based competition), business fit (including sustained leading position, revenue visibility, and favorable customer value-add versus switching cost or risk) and financial return profile (accretive growth and margins and double-digit return on invested capital). We opportunistically divest businesses where we see limited runway for future value creation relative to our aspirations, or where market and business fundamentals change and no longer fit our criteria of business attractiveness and portfolio fit. Finally, we have consistently returned cash to shareholders by paying dividends, which have increased annually over each of the last 67 years. We undertake opportunistic share repurchases as part of our capital allocation strategy. We employ a prudent financial policy to support our capital allocation strategy, which includes maintaining an investment grade credit rating.

Portfolio Development

Acquisitions

Our acquisition program has two key elements. As a first priority, we seek to acquire attractive add-on businesses with a strong fit that enhance our existing franchises either by increasing their reach and customer access, by broadening their product mix or by enhancing technological capabilities and customer value-add. Second, in the right circumstances, we may strategically pursue larger, stand-alone businesses that complement our existing businesses or provide a path for us to pursue growth in near adjacencies. With all our acquisitions, we seek businesses that are leaders in their markets or niches, have a strong track record for innovation, offer differentiated solutions, clearly complement our businesses, have a solid organic growth profile and attractive and sustainable returns, and offer significant synergy potential to generate double-digit return on capital within three years after the acquisition is completed.

Over the past three years (2020 through 2022), we have spent approximately \$1,774.4 million, net of cash acquired and including contingent consideration, to purchase eighteen businesses. For more details, see Note 3 — Acquisitions in the Consolidated Financial Statements in Item 8 of this Form 10-K.

Our future growth depends in large part on finding and acquiring successful businesses that expand the scope of our offerings and make us an even more important supplier to our customers. While we expect to generate annual organic revenue growth above that of gross domestic product (3% to 5% annually on average) over a long-term business cycle absent extraordinary adverse economic conditions, our success in consistently growing the portfolio is also dependent on the ability to acquire and integrate businesses within our existing structure. To track post-merger integration and accountability, we utilize an internal scorecard and well-defined processes to help ensure expected synergies are realized and value is created.

Dispositions

From time to time, we have sold or divested some of our businesses based on changes in specific market outlook, structural changes in financial performance, value-creation potential, or for other strategic considerations, which included an effort to reduce our exposure to cyclical markets or focus on our higher margin growth spaces.

Going forward, we recognize that some businesses in Dover's portfolio may have a greater value-creation potential if owned by another parent with a larger presence and focus on a given niche. We pragmatically consider such opportunities as part of our ongoing portfolio management and review processes, and execute divestitures if the value created is determined to be at an appropriate premium to the value of such business to Dover and the divestitures allow Dover shareholders to participate in the future value-creation potential from a change in ownership.

For more details, see Note 4 — Dispositions in the Consolidated Financial Statements in Item 8 of this Form 10-K.

Business Segments

As noted previously, Dover's five segments are structured around businesses with similar business models, go-to-market strategies and manufacturing practices. This structure enables management efficiency, aligns Dover's operations with its strategic initiatives and capital allocation priorities, and provides transparency about our performance to external stakeholders. Dover's five operating and reportable segments are as follows: Engineered Products, Clean Energy & Fueling, Imaging & Identification, Pumps & Process Solutions and Climate & Sustainability Technologies. For financial information about our segments and geographic areas, see Note 19 — Segment Information in the Consolidated Financial Statements in Item 8 of this Form 10-K.

Engineered Products

Our Engineered Products segment provides a wide range of equipment, components, software, solutions and services that have broad customer applications across a number of markets, including: solid waste handling, aftermarket vehicle service, industrial automation, aerospace and defense, industrial winch and hoist, and fluid dispensing. Our waste handling business is a leading North American supplier of equipment, software and services for the refuse collection industry and for on-site processing and compaction of trash and recyclable materials. Our vehicle service business provides products, software and

services used primarily in vehicle repair and maintenance, including light and heavy-duty vehicle lifts, wheel service equipment, vehicle diagnostics and vehicle collision repair solutions. Our industrial automation business provides a wide range of modular automation components including manual clamps, power clamps, rotary and linear mechanical indexers, conveyors, pick and place units, glove ports and manipulators, as well as end-of-arm robotic grippers, slides and end effectors. Our industrial winch and hoist business provides a range of winches, hoists, bearings, drives, and electric monitoring systems for infrastructure and other industrial markets. Our aerospace and defense business supplies radio frequency and microwave filters and switches, as well as signal intelligence solutions, to enable secure communications in aerospace and defense applications, as well as benchtop soldering and fluid dispensing solutions in electronics and industrial product assembly markets.

Our Engineered Products segment's products are manufactured primarily in the U.S., Europe and Asia and are sold throughout the world, directly and through a network of distributors.

Clean Energy & Fueling

Our Clean Energy & Fueling segment provides components, equipment and software, and service solutions enabling safe storage, transport, handling and dispensing of clean and traditional fuels, cryogenic gases and other hazardous fluids, as well as safe and efficient operation of retail fueling and vehicle wash establishments across the globe. Among solutions supplied by the segment are dispensing equipment and components for gasoline, compressed natural gas (CNG), liquefied natural gas (LNG) and hydrogen (H2) fueling sites, electric vehicle charging stations, payment systems, hardware and underground containment systems, vehicle wash systems, as well as asset tracking, monitoring and operational optimization software.

Our Clean Energy & Fueling segment's products are manufactured primarily in North America, Europe, Asia, and South America and are sold throughout the world directly and through a network of distributors.

Imaging & Identification

The companies in our Imaging & Identification segment are global suppliers of precision marking and coding, product traceability, brand protection, and digital textile printing equipment and solutions, as well as related consumables, software and services. Our marking and coding businesses primarily design and manufacture equipment and consumables used for printing variable information (such as bar codes, dates, and serial numbers) on fast-moving consumer goods, provides serialization solutions for pharmaceutical customers, and develops supply chain traceability solutions capitalizing on expanding food and product safety, supply chain traceability and brand protection requirements. In addition, our businesses serving the apparel and textile printing market develop, manufacture and sell equipment, software, consumables and service solutions used in digital textile, soft signage and specialty materials markets. These businesses are benefiting from a secular shift from analog to digital printing due to comparative advantages in customization of garments and sustainability (the digital printing process is significantly more environment-friendly due to lower water consumption). Businesses within this segment leverage digital printing capabilities and operate business models that involve initial equipment and software sales followed by significant consumable, software and service aftermarket revenue streams.

Our Imaging & Identification segment's products are manufactured primarily in North America, Europe and Asia and are sold throughout the world directly and through a network of distributors.

Pumps & Process Solutions

The businesses in our Pumps & Process Solutions segment manufacture specialty pumps, single-use pumps, connectors and flow meters, plastics and polymers processing equipment, and highly-engineered components for rotating and reciprocating machinery. The segment's products are used in a wide variety of markets, including plastics and polymers processing, chemicals production, food/sanitary, biopharma, medical, transportation, petroleum refining, power generation and general industrial applications. The products in this segment are generally used in demanding and specialized operating environments with high performance requirements. Businesses within this segment share the following commonalities: their products are predominantly components or parts of larger equipment and production systems with our products often specified by end customers or regulations, they participate in markets with a diverse and fragmented customer base and where there is a significant demand for aftermarket equipment and parts from a large installed base, and the route-to-market is a mix of distribution and direct sales.

Our Pumps & Process Solutions segment's products are manufactured primarily in North America, Europe, and Asia and are sold throughout the world directly and through a network of distributors and original equipment manufacturers.

Climate & Sustainability Technologies

Our Climate & Sustainability Technologies segment is a provider of innovative and energy-efficient equipment and systems that serve the commercial refrigeration, heating and cooling, and aluminum can-making equipment markets. Our refrigeration business manufactures refrigeration systems (including environmentally friendly systems like CO²), refrigeration display cases and commercial glass refrigerator and freezer doors for food retail and industrial applications. Our heat exchanger business manufactures energy-efficient brazed plate heat exchangers used for residential climate control applications, including heat pumps, as well as industrial heating and cooling applications. The other business in this segment designs and manufactures machinery and associated spare parts used for aluminum can-making, along with providing turnkey can line solutions. The majority of the products that are manufactured or serviced by the Climate & Sustainability Technologies segment are used by the retail food industry, including supermarkets, "big-box" retail and convenience stores, the commercial/industrial refrigeration industry, food production markets and beverage can-making industries.

Our Climate & Sustainability Technologies segment's products are manufactured primarily in North America, Europe and Asia and are sold globally, directly and through a network of distributors.

Raw Materials

We use a wide variety of raw materials, primarily metals and semi-processed or finished components, which are generally available from a number of sources. As a result, the loss of any single supplier has not had, and is not likely to have, a material impact on operating profits at the consolidated level. While the required raw materials are generally available, commodity pricing can be volatile, particularly for various grades of steel, copper, aluminum and select other commodities. Although cost increases in commodities may be recovered through increased prices to customers, our operating results are exposed to such fluctuations. We attempt to control such costs through index based contracts with suppliers and customers and various other programs, such as our global supply chain activities.

Markets for multiple raw materials saw significant cost increases throughout 2021 and 2022, as well as increases in transportation costs to deliver materials to our manufacturing sites, which we offset through price increases and other levers. Additionally, supply chain disruptions have caused shortages of material inputs in several of our businesses, which negatively impacted profitability of such businesses as we were required to seek alternative sources of supply at higher costs or interrupt our normal manufacturing process flow leading to less efficient output and cost.

Research and Development

Our businesses invest to develop innovative new products, as well as to upgrade and improve existing products, to satisfy customer needs, including demand for energy-efficient products designed to help customers meet sustainability goals, expand revenue opportunities geographically, maintain or extend competitive advantages, improve product reliability and reduce production costs.

Our Imaging & Identification segment expends significant effort in research and development because the rate of product development by their customers is often quite high. Our businesses that develop product identification, printing equipment and software solutions believe their customers expect a continuing rate of product innovation, performance improvement and reduction in total cost of ownership. The result has been downward pricing trends that can only be mitigated with the continuous introduction of innovative product solutions in a market where product life cycles generally average less than seven years.

Our Clean Energy & Fueling segment invests in research and development to advance innovative traditional and alternative fuel dispensing equipment and components, payment platforms, fuel site asset management and connectivity solutions, IIoT-enabled cloud-based connected solutions for retail and commercial fleet fueling settings, components for high-criticality cryogenic gas storage and transportation applications, including hydrogen and liquefied natural gas. These technology investments align with our customer's needs and our commitment to delivering to our customers opportunities for operational cost reductions, increased sales, and an enhanced customer experience for their customers through a combination of intelligent fueling and retail solutions.

Our Pumps & Process Solutions segment invests in research and development for new product introduction and custom solutions to drive volume and share in both existing markets and newer/faster growth markets – such as single-use biopharmaceutical manufacturing and liquid cooling of high performance electronics. These investments will allow us to take advantage of existing growth trends such as cell and gene therapy applications coming on the market.

Many of our businesses are also involved in important product improvement initiatives. These businesses concentrate on working closely with customers on specific applications, expanding product lines and market applications and continuously improving manufacturing processes. Some of these businesses experience a much more rapid rate of change requiring higher product development capability and new product introduction.

Similarly, our businesses invest in research and development to pursue digital strategies based on customer needs and leverage the capabilities of the Dover Digital Labs center to deliver on those digital strategies. For example, Vehicle Services Group, within the Engineered Products segment, launched Constellation, an automated artificial intelligence enabled hail damage detection system with work completed at the Digital Labs. Constellation is the automotive repair industry's first automated mobile 3D hail damage scanning system that provides a complete workflow system, tracking hail-damaged vehicles from the initial damage incident, through the claims process and ultimately to vehicle repair.

Human Capital Resources

Our employees are our most valuable asset and are critical to our ability to deliver on our strategic plans. Our success in delivering high quality and innovative products and solutions for our customers and driving operational excellence is only achievable through the talent, expertise, and dedication of our global team. We had over 25,000 employees worldwide as of December 31, 2022.

Attraction, Development, and Retention

We recognize that attracting, developing and retaining skilled talent and promoting a diverse and inclusive culture are essential to maintaining our leadership positions in the markets we serve. While our operating companies are the hubs of these activities — an effective model that puts ownership in the businesses and cultures that are the source of opportunities for employees — we are increasingly leveraging the corporate center to drive talent recruitment and development and consistent human capital management practices across our businesses. This center-led focus is enabling us to make development opportunities available across our enterprise which promotes employee advancement, engagement and retention. We offer employees resources to continuously improve their skills and performance with the goal of further cultivating the diverse, entrepreneurial talent inside our global businesses to fill key positions. We seek people who are proactive and dedicated, demonstrate an ownership mindset and share our commitment to the pursuit of operational excellence. We continue to make significant investments in talent development and recognize that the growth and development of our employees is essential for our continued success.

Diversity and Inclusion

We view the diversity of our employees as a strength to better serve our customers and communities. We also believe the diversity of our workforce enables us to attract new talent, keeps our employees engaged and productive, and advances innovation from ideas reflecting the broad diversity of our employees' backgrounds, experiences, and perspectives. To that end, we have taken various actions to enhance diversity, including partnering with organizations that can support our efforts to identify and recruit talented and diverse candidates.

We aim to cultivate an inclusive culture that enables employees to feel connected to our business objectives and valued for their contributions. One of the ways in which we seek to promote an inclusive work environment is by supporting our operating companies in establishing employee resource groups. These groups allow for collaboration and serve as an open forum for networking, professional development, and mentoring. We are committed to our efforts to maintain a work environment that is professional, inclusive, and free from discrimination and harassment. To help educate our workforce on the benefits of an inclusive environment, and drive awareness, we have invested in training across the organization focused on diversity and inclusion topics.

Health and Safety

We are committed to providing a healthy environment and safe workplace by operating in accordance with established health and safety protocols across our facilities and maintaining an enhanced health and safety compliance program. As part of our continuous improvement process, we have implemented a global digital system designed to track key metrics and actions pertinent to our health and safety program. This software supports our strategy to proactively reduce hazards thereby further bettering shop floor safety.

Human Capital Investments Related to Strategic Priorities

In line with our strategic priorities, we have additionally invested in the following aspects of human capital resource management, among other areas:

- Dover Digital Labs We are continuing to leverage our Digital Labs team to improve our digital capabilities. Our
 team of software developers, data scientists, and product managers drive digital transformation across our businesses
 by enhancing customer experience, developing connected products, enabling digital manufacturing and securing our
 digital products.
- Operational management Our operations teams, including our management team at the corporate center, continually focuses on improving operational efficiency, such as implementing production automation.
- Shared services We are continuing to further centralize shared services under Dover Business Services and our India Innovation Center. Our shared services capabilities include a wide range of functional areas including transactional support, human resources, IT, finance and accounting, engineering and product development. These services enable productivity and growth as well as free up resources at our businesses to focus on customers, markets and product development.

Intellectual Property and Intangible Assets

Our businesses own many patents, trademarks, licenses and other forms of intellectual property, which have been created, registered or acquired over a number of years and, to the extent relevant, expire at various times over a number of years. A large portion of our businesses' intellectual property consists of patents, unpatented technology and proprietary information constituting trade secrets that we seek to protect in various ways, including confidentiality agreements with employees and suppliers where appropriate. In addition, a significant portion of our intangible assets relate to customer relationships. While our intellectual property and customer relationships are important to our success, the loss or expiration of any of these rights or relationships is not likely to materially affect our results on a consolidated basis. We believe that our commitment to continuous engineering improvements, new product development and improved manufacturing techniques, as well as strong sales, marketing and service efforts, are significant to our general leadership positions in the niche markets we serve.

Customers

We serve thousands of customers, none of which accounted for more than 10% of our consolidated revenue in 2022. Given our diversity of served markets, customer concentrations are not significant. Businesses supplying the environmental solutions, defense, automotive and commercial refrigeration industries tend to deal with a few large customers that are significant within those industries. This also tends to be true for businesses supplying the power generation and chemical industries. In the other markets served, there is usually a much lower concentration of customers, particularly where our companies provide a substantial number of products and services applicable to a broad range of end-use applications.

Seasonality

In general, while our businesses are not highly seasonal, we do tend to have stronger revenue generation in the second half of the year, which is driven by customer capital expenditure timing and seasonal activity patterns in our end-markets. Our businesses serving the retail fueling market tend to increase in the second half of the year based on the historical purchasing patterns of their customers. Our businesses serving the major equipment markets, such as power generation, chemical and processing industries, have longer lead times geared to seasonal, commercial, or consumer demands and customers in these markets tend to delay or accelerate product ordering and delivery to coincide with those market trends which moderates the

aforementioned seasonality patterns. Our food retail refrigeration business tends to face higher levels of demand in the second and third quarters as retailers avoid construction and remodeling activity during fall/winter holidays.

Competition

Our competitive environment is complex because of the wide diversity of our products manufactured and the markets served. In general, most of our businesses are market leaders that compete with only a few companies, and the key competitive factors are customer service, product quality, price and innovation. A summary of our key competitors within each of our segments follows:

Segment	Key Competitors				
Engineered Products	Snap-On Inc. (Challenger Lifts, Car-O-Liner), Vontier (Hennessey Industries, Inc.), Oshkosh Corp. (McNeilus), Labrie Enviroquip Group, Geotab Inc., AMCS Group, Tünkers Maschinenbau GmbH, PACCAR (Braden), Teledyne				
Clean Energy & Fueling	Vontier (Gilbarco Veeder-Root, DRB), Tatsuno, Verifone, Franklin Electric, Elaflex, Ingersoll Rand (Emco Wheaton), Dixon Valve & Coupling Company, PDI Technologies, Inc., Salco, Sonny's Enterprises LLC, National Carwash Solutions, Washtec AG				
Imaging & Identification	Danaher Corporation (Videojet), Brother Industries, Ltd. (Domino Printing), Electronics for Imaging (Reggiani), SPG Prints, Konica Minolta, Kornit Digital Ltd.				
Pumps & Process Solutions	IDEX Corporation, Ingersoll Rand, Millipore, Danaher Corporation (Pall), Avantor (Masterflex), Nordson Corporation, ITT, SPX Flow Inc. (Waukesha), Spirax Sarco, Kingsbury, Seko, Ecolab, Hoerbiger Holdings AG, Miba AG, Hillenbrand Inc. (Coperion)				
Climate & Sustainability Technologies	Panasonic (Hussman Corp.), Alfa Laval, Danfoss, Stolle Machinery, Crown Holdings				

International

Consistent with our strategic focus on positioning our businesses for growth, we aim to grow our revenue in international markets, particularly in developing economies in Asia, the Middle East, Eastern Europe and South America.

Most of our non-U.S. subsidiaries and affiliates are currently based in China, France, Germany, Italy, Sweden, Switzerland, the United Kingdom, and other locations including Australia, Brazil, Canada, India, Mexico, and the Netherlands.

The following table shows annual revenue derived from customers outside the U.S. as a percentage of total annual revenue for each of the last three years, by segment and in total:

	Percentage of Non-U.S. Revenue by Segment		
	Years Ended December 31,		
	2022	2021	2020
Engineered Products	25 %	27 %	27 %
Clean Energy & Fueling	41 %	45 %	45 %
Imaging & Identification	72 %	75 %	75 %
Pumps & Process Solutions	51 %	53 %	51 %
Climate & Sustainability Technologies	40 %	37 %	37 %
Total percentage of revenue derived from customers outside of the United States	43 %	46 %	45 %

Our international operations are subject to certain risks, such as price and exchange rate fluctuations and non-U.S. governmental restrictions, which are discussed further in Item 1A. "Risk Factors." For additional details regarding our non-U.S. revenue, impact of foreign currency exchange rates, and the geographic allocation of the assets, see Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 19 — Segment Information to the Consolidated Financial Statements in Items 7 and 8, respectively, of this Form 10-K.

Environmental Matters

Sustainability

We are committed to creating economic value for shareholders by developing products designed to help our customers meet their sustainability goals, run their operations more efficiently and satisfy evolving regulatory and environmental standards. We believe that sustainability-driven innovation in response to customer demand helps us contribute positively to enhanced resource efficiency and waste reduction while presenting a valuable growth opportunity. Aligned with this commitment, in 2021, we announced science-based targets to reduce our greenhouse gas emissions. These targets include an absolute reduction of scope 1 and scope 2 market-based greenhouse gas emissions of 30 percent by 2030, from a 2019 baseline year, and an absolute reduction of scope 3 greenhouse gas emissions of 15 percent by 2030, from a 2019 baseline year.

We highlight key initiatives and performance metrics about our sustainability activities under the "Sustainability" tab on our website, www.dovercorporation.com.

Other Matters

Our operations are governed by a variety of international, national, state and local environmental laws. We are committed to continued compliance and believe our operations generally are in substantial compliance with these laws. In a few instances, particular plants and businesses have been the subject of administrative and legal proceedings with governmental agencies or private parties relating to the discharge or potential discharge of regulated substances. Where necessary, these matters have been addressed with specific consent orders to achieve compliance.

There have been no material effects upon our earnings and competitive position resulting from our compliance with laws or regulations enacted or adopted relating to the protection of the environment. We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass-through" costs from energy suppliers, suppliers of raw materials and other services related to our operations.

Other Information

We make available free of charge through the "Investor Information" link on our website, www.dovercorporation.com, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to these reports. We post each of these reports on the website as soon as reasonably practicable after the report is filed with the Securities and Exchange Commission. The contents of our website are not intended to be incorporated by reference into this Form 10-K, and any reference to our website is intended to be inactive textual references only.

ITEM 1A. RISK FACTORS

The risk factors discussed in this section should be considered together with information included elsewhere in this Form 10-K and should not be considered the only risks to which we are exposed. In general, we are subject to the same general risks and uncertainties that impact many other industrial companies such as general economic, industry and/or market conditions and growth rates; the impact of natural disasters and their effect on global markets; and changes in laws or accounting rules. Additional risks and uncertainties not currently known to us or that we currently believe are immaterial also may impair our businesses, including our results of operations, liquidity and financial condition.

Business and Operational Risks

• The COVID-19 pandemic has adversely impacted, and continues to pose risks to, our businesses, the nature and extent of which are highly uncertain and unpredictable.

The COVID-19 pandemic has disrupted the global economy and adversely impacted our businesses, including demand for our products across multiple end-markets as well as our supply chain and operations. While we have experienced sequentially improving activity in most markets and geographies, the public health situation, global response measures and corresponding impacts on various markets remain fluid and uncertain and may lead to sudden changes in trajectory and outlook. Accordingly, we are currently unable to quantify the full and long-term impact of the pandemic on our results of operations, financial position and cash flows.

We have taken and will continue to take steps to mitigate the risks of COVID-19 by working with our customers, employees, suppliers and other stakeholders. The emergence of new variants of COVID-19, evolving government plans around the world to institute vaccination mandates, including in the U.S., and limited availability of vaccines in various jurisdictions, create uncertainty that may impact our employees and result in labor shortages and unforeseen costs. We cannot predict the potential for operating at reduced capacity or the size of the workforce that may be impacted by potential labor actions such as furloughs or layoffs. In addition, the uncertain recovery in demand has had business impacts, including increased material cost inflation (principally steel), labor availability issues and logistics costs increases. Some of our businesses have also been impacted from supplier component input availability issues.

The extent to which our operations may be impacted by COVID-19 will depend on future developments that are highly uncertain, including the pandemic's duration, the emergence of different COVID-19 variants, the efficacy and adoption rates of vaccines, the availability of oral medicines and actions by governments and private enterprises to contain the outbreak or mitigate the impact of the pandemic. For example, applicable laws and government measures, such as U.S. federal vaccine mandates or Occupational Safety and Health Administration requirements for vaccination or regular testing, could also result in skilled labor impacts including voluntary attrition or difficulty finding labor or otherwise adversely affect our ability to operate our facilities, obtain materials and component inputs from suppliers or deliver our products in a timely manner.

Furthermore, the pandemic has impacted and may further impact the broader economies of affected countries, including negatively impacting economic growth, the proper functioning of financial and capital markets, foreign currency exchange rates and interest rates. Due to the continuing uncertainties surrounding the pandemic, we are unable to determine the impact that it will have on our financial position, operating results and cash flows in future periods.

Recessions, adverse market conditions or downturns in the markets we serve could adversely affect our operations.

In the past, our operations have been exposed to volatility due to changes in general economic conditions or consumer preferences, recessions or adverse conditions in the markets we serve. In the future, similar changes could adversely impact overall sales, operating results (including potential impairment charges for goodwill or other long-lived assets) and cash flows. Moreover, during economic downturns we may undertake more extensive restructuring actions, including workforce reductions, global facility consolidations, centralization of certain business support activities, and other cost reduction initiatives, and incur higher costs. As these plans and actions can be complex, the anticipated operational improvements, efficiencies and other benefits might be delayed or not realized. We are unable to determine

the impact that recessions, adverse market conditions or downturns will have on our financial position, operating results and cash flows in future periods.

 Increases in labor costs, potential labor disputes and work stoppages or an inability to hire skilled personnel could adversely affect our business.

We have a number of collective bargaining units in the U.S. and various collective labor arrangements outside the U.S. We are subject to potential work stoppages, union and works council campaigns and other labor disputes, any of which could adversely impact our productivity, reputation, results of operations, financial condition and cash flows.

Furthermore, the competition for skilled personnel is often intense in the regions in which our manufacturing facilities are located. A sustained labor shortage or increased turnover rates within our employee base, increases in the salaries and wages paid by competing employers, as a result of general macroeconomic factors or otherwise, could lead to increased costs, such as increased overtime to meet demand and potentially further increase salaries and wage rates to attract and retain employees, and could negatively affect our ability to efficiently operate our manufacturing facilities and overall business. If we are unable to hire and retain employees capable of performing at a high level, our business, financial condition and results of operations could be adversely affected.

 Our reputation, ability to do business and results of operations may be impaired by improper conduct by any of our employees, agents, or business partners.

While we strive to maintain high standards, we cannot provide assurance that our internal controls and compliance systems will always protect us from acts committed by our employees, agents, or business partners that would violate the laws of the jurisdictions where we do business, including the laws governing payments to government officials, bribery, fraud, anti-kickback and false claims, competition, export and import compliance, environmental compliance, money laundering and data privacy, as well as the improper use of proprietary information or social media. Any such violations of law or improper actions could: subject us to civil or criminal investigations; lead to substantial civil or criminal, monetary and non-monetary penalties and related shareholder lawsuits; lead to increased costs of compliance; and damage our reputation, our consolidated results of operations, financial condition and cash flows.

We are subject to risks relating to our existing international operations and expansion into new geographical markets.

Approximately 43% and 46% of our revenues for 2022 and 2021, respectively, were derived outside the United States and we expect international sales to continue to represent a significant portion of our revenues given our global growth strategy. As a result of our international operations and our global expansion strategy, we are subject to various risks, including:

- o political, social and economic instability and disruptions;
- o government import and export controls, economic sanctions, embargoes or trade restrictions;
- o the imposition of duties and tariffs and other trade barriers and retaliatory countermeasures;
- o limitations on ownership and dividend of earnings;
- o transportation delays and interruptions;
- o risk to theft of proprietary information and/or intellectual property;
- o labor unrest and current and changing regulatory environments;
- o widespread public health crises, such as a pandemic or epidemic;
- o increased compliance costs, including costs associated with disclosure requirements and related due diligence;
- o the impact of loss of a single-source manufacturing facility;
- o difficulties in staffing and managing multi-national operations;
- o limitations on our ability to enforce legal rights and remedies;
- o potentially adverse tax consequences; and
- o access to or control of networks and confidential information due to local government controls and vulnerability of local networks to cyber risks.

If we are unable to successfully manage the risks associated with expanding our global business or adequately manage operational risks of our existing international operations, the risks could have a material adverse effect on our growth in geographic markets, our reputation, our consolidated results of operations, financial position and cash flows.

Our operations, businesses and products are subject to cybersecurity risks.

We depend on our own and third party IT systems, including cloud-based systems and managed service providers, to store, process and protect our information and support our business activities. We also use third party IT systems to support employee data processing for our global workforce and to support customer business activities, such as transmitting payment information, providing mobile monitoring services, and capturing operational data. Additionally, some of our products contain computer hardware and software and offer the ability to connect to computer networks. Increasingly, our customers, including government customers, are requiring cybersecurity protections and mandating cybersecurity standards for our products. Our business has both an increasing reliance on IT systems and an increasing digital footprint as a result of changing technologies, connected devices and digital offerings, as well as expanded remote work policies. If these technologies, systems, products or services are damaged, cease to function properly, are compromised due to employee or third-party contractor error, user error, malfeasance, system errors, or other vulnerabilities, or are subject to cybersecurity attacks, such as those involving denial of service attacks, unauthorized access, malicious software, or other intrusions, including by criminals, nation states or insiders, our business may be adversely impacted. The impacts could include production downtimes, operational delays, and other impacts on our operations and ability to provide products and services to our customers; compromise of confidential, proprietary or otherwise protected information, including personal information and customer confidential data; destruction, corruption, or theft of data or intellectual property; manipulation, disruption, or improper use of these technologies, systems, products or services; financial losses from fraudulent transactions, remedial actions, loss of business or potential liability; adverse media coverage; and legal claims or legal proceedings, including regulatory investigations, actions and fines; and damage to our reputation. There has been a rise in the number of cyberattacks targeting confidential business information generally and in the manufacturing industry specifically, as well as an increase in cyberattacks targeting managed service providers, by both state-sponsored and criminal organizations. Moreover, there has been a rise in the number of cyberattacks that depend on human error or manipulation, including phishing attacks or schemes that use social engineering to gain access to systems or perpetuate wire transfer or other frauds.

These trends increase the likelihood of such events occurring as well as the costs associated with protecting against such attacks. It is possible for vulnerabilities in our IT systems to remain undetected for an extended period of time up to and including several years. We attempt to mitigate these risks by employing a number of measures, including employee training, systems monitoring and other technical security controls, a breach response plan, maintenance of backup and protective systems, and security personnel. Notwithstanding those measures, our systems, networks, products and services remain potentially vulnerable to known or unknown cybersecurity attacks and other threats, any of which could have a material adverse effect on our consolidated results of operations, financial condition and cash flows. We, and the service providers that we depend on to support our systems and business operations, are regularly the target of, and periodically respond to, cyberattacks, including phishing and denial-of-service attacks, and must continuously monitor and develop our systems to protect our technology infrastructure and data from misappropriation or corruption. In addition, a cybersecurity attack could persist for an extended period of time before being detected, and, following detection, it could take considerable time for us to obtain full and reliable information about the extent, amount and type of information compromised. During the course of an investigation, we may not know the full impact of the event and how to remediate it, and actions, decisions and mistakes that are taken or made may further increase the negative effects of the event on our business, results of operations and reputation. While we maintain insurance coverage that is intended to address certain aspects of cybersecurity risks, such insurance coverage may not cover all losses or all types of claims that arise. As cyber threats continue to evolve, cybersecurity and data protection laws and regulations continue to develop in the U.S. and globally, and our business continues to move towards increased online connectivity within our information systems and through more Internet-enabled products and offerings, we expect to expend additional resources to continue to build out our compliance programs, strengthen our information security, data protection and business continuity measures, and investigate and remediate vulnerabilities.

Unforeseen developments in contingencies such as litigation and product recalls could adversely affect our consolidated results of operations, financial condition and cash flows.

We and certain of our subsidiaries are, and from time to time may become, parties to a number of legal proceedings incidental to our businesses, including alleged injuries arising out of the use of products or exposure to hazardous substances, or claims related to patent infringement, employment matters and commercial disputes. The defense of these lawsuits may require significant expenses and divert management's attention, and we may be required to pay damages that could adversely affect our consolidated results of operations, financial condition and cash flows. In addition, any insurance or indemnification rights that we may have may be insufficient or unavailable to protect us against potential loss exposures.

We may be exposed to product recalls and adverse public relations if our products are alleged to have defects, to cause property damage, to cause injury or illness, or if we are alleged to have violated governmental regulations. A product recall could result in substantial and unexpected expenditures, which would reduce operating profit and cash flow. In addition, a product recall may require significant management attention. Product recalls may hurt the value of our brands and lead to decreased demand for our products. Product recalls also may lead to increased scrutiny by federal, state or international regulatory agencies of our operations and increased litigation and could have a material adverse effect on our consolidated results of operations, financial condition and cash flows.

Our revenue, operating profits and cash flows could be adversely affected if our businesses are unable to protect or obtain patent and other intellectual property rights.

Our businesses own patents, trademarks, licenses and other forms of intellectual property related to their products and continuously invest in research and development that may result in innovations and general intellectual property rights. Our businesses employ various measures to develop, maintain and protect their intellectual property rights. These measures may not be effective in capturing intellectual property rights, and they may not prevent their intellectual property from being challenged, invalidated, or circumvented, particularly in countries where intellectual property rights are not highly developed or protected. Unauthorized use of our businesses' intellectual property rights could adversely impact the competitive position of our businesses and could have a negative impact on our consolidated results of operations, financial condition and cash flows.

We could be negatively impacted by environmental, social and governance (ESG) and sustainability matters.

Governments, shareholders, customers, employees and other stakeholders are increasingly focusing on corporate ESG practices and disclosures, and expectations in this area are rapidly evolving and growing. We have announced certain initiatives, including goals, regarding our focus areas, which include greenhouse gas emissions reductions, health and safety, diversity and inclusion, talent attraction and development, and innovation for sustainable products. The criteria by which our ESG practices are assessed may change due to the evolution of the sustainability landscape, which could result in greater expectations of us and may cause us to undertake costly initiatives to satisfy new criteria. Moreover, the increasing attention to sustainability could also result in reduced demand for certain of our products or services and/or reduced profits. If we are unable to respond effectively, investors may conclude that our policies and/or actions with respect to ESG matters are inadequate. If we fail or are perceived to have failed to achieve previously announced initiatives or goals or to accurately disclose our progress on such initiatives or goals, our reputation, business, financial condition and results of operations could be adversely impacted.

Industry Risks

 Increasing product, service and price competition by international and domestic competitors, including new entrants, and our inability to introduce new and competitive products could cause our businesses to generate lower revenue, operating profits and cash flows.

Our competitive environment is complex because of the wide diversity of the products that our businesses manufacture and the markets they serve. In general, most of our businesses compete with only a few companies. Our ability to compete effectively depends on how successfully we anticipate and respond to various competitive factors, including new products, digital solutions and support services that may be introduced by competitors, changes in customer preferences, evolving regulations, new business models and technologies and pricing pressures. If our businesses are unable to anticipate their competitors' developments or identify customer needs and preferences on a timely basis, successfully introduce new products, digital solutions and support services in response to such competitive factors, or adopt to market changes relating to climate change related policies, they could lose customers to competitors. If our businesses do not compete effectively, we may experience lower revenue, operating profits and cash flows.

• Our operating results depend in part on the timely development and commercialization, and customer acceptance, of new and enhanced products, digital solutions and support services based on technological innovation.

The success of new and improved products, digital solutions and support services depends on their initial and continued acceptance by our customers. Certain of our businesses sell in markets that are characterized by rapid technological changes, frequent new product introductions, changing industry standards and corresponding shifts in customer demand, which may result in unpredictable product transitions, shortened life cycles and increased importance of being first to market. Failure to correctly identify and predict customer needs and preferences, to deliver high quality, innovative and competitive products to the market, to adequately protect our intellectual property rights or to acquire rights to third-party technologies, to provide adequate data security and privacy protections and to stimulate customer demand for, and convince customers to adopt new products, digital solutions and support services could adversely affect our consolidated results of operations, financial condition and cash flows. In addition, we may experience difficulties or delays in the research, development, production or marketing of new products, digital solutions and support services which may prevent us from recouping or realizing a return on the investments required to continue to bring new products and services to market.

We could lose customers or generate lower revenue, operating profits and cash flows if there are significant increases
in the cost of our raw materials or components, or if suppliers are not able to meet our quality and delivery
requirements.

We purchase raw materials, sub-assemblies and components for use in our manufacturing operations. Factors such as freight costs, transportation availability, inventory levels, the level of imports, the imposition of duties, tariffs and other trade barriers and general economic conditions may affect the price of these raw materials, sub-assemblies and components. Significant price increases for certain commodities, other raw materials or components could adversely affect operating profits of our businesses. While we generally attempt to mitigate the impact of increased raw material prices by hedging or passing along the increased costs to customers, there may be a time delay between the increased raw

material prices and the ability to increase the prices of products, or we may be unable to increase the prices of products due to a competitor's pricing pressure or other factors.

We use a wide range of raw materials and components in our manufacturing operations that come from numerous suppliers. While we believe that sources of supply for raw materials and components are generally adequate, it is difficult to predict what effects of extended lead times or shortages may have in the future. In addition, some of the raw materials and components may be available only from limited or single source suppliers. If a single source or limited source supplier were to cease or interrupt production for any reason or otherwise fail to supply those raw materials or components to us on favorable purchase terms, including at favorable prices, in sufficient quantities and with adequate lead times needed for efficient manufacturing, our ability to meet customer commitments, and satisfy market demands for affected products could be negatively affected. The disruption of our global supply chain for any reason, including for issues such as COVID-19 or other health epidemics or pandemics, labor disputes, loss of single source or limited source supplier, inability to procure sufficient raw materials, quality control issues, ethical sourcing issues, a supplier's financial distress, natural disasters, looting, vandalism or acts of war or terrorism, trade sanctions or other external factors over which we have no control, could interrupt product supply and, if not effectively managed and remedied, have a material adverse impact on our business operations, financial condition and results of operations.

Legal and Regulatory Risks

Our businesses are subject to regulation and their profitability and reputation could be adversely affected by domestic
and foreign governmental and public policy changes, risks associated with emerging markets, changes in statutory
tax rates and unanticipated outcomes with respect to tax audits.

Our businesses' domestic and international sales and operations must comply with a wide variety of laws, regulations and policies (including environmental, employment and health and safety regulations, data security laws, data privacy laws, export/import laws, tax policies such as export subsidy programs and research and experimentation credits, carbon emission regulations, energy efficiency and design regulations and other similar programs). These laws, regulations and policies are complex, change frequently, have tended to become more stringent over time and may be inconsistent across jurisdictions. Failure to comply (or any alleged or perceived failure to comply) with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties as well as potential damage to our reputation and disruption to our business. We cannot provide assurance that our costs of complying with new and evolving regulatory reporting requirements and current or future laws will not exceed our estimates. Any of these factors could adversely affect customer demand, our relationships with customers and suppliers, and our business and financial position.

Certain of our businesses have sales or operations in countries, including Brazil, India and China, and may in the future invest in other countries, any of which may carry high levels of currency, political, compliance, or economic risk. While these risks or the impact of these risks are difficult to predict, any one or more of them could adversely affect our businesses and reputation.

Our effective tax rate is impacted by the mix of earnings among countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets and changes in income tax laws. The amount of income taxes and other taxes paid can be adversely impacted by changes in statutory tax rates and laws and are subject to ongoing audits by governmental authorities. If these audits result in assessments different from amounts estimated, then our consolidated results of operations, financial position and cash flows may be adversely affected by unfavorable tax adjustments.

Financial and Strategic Risks

• Our exposure to exchange rate fluctuations on cross-border transactions and the translation of local currency results into U.S. dollars could negatively impact our results of operations.

We conduct business through our subsidiaries in many different countries, and fluctuations in currency exchange rates could have a significant impact on our reported consolidated results of operations, financial condition and cash flows, which are presented in U.S. dollars. Cross-border transactions, both with external parties and intercompany relationships, result in increased exposure to foreign exchange effects. Accordingly, significant changes in currency exchange rates, particularly the euro, Chinese renminbi (yuan), Swedish krona, pound sterling, Indian rupee, Singapore dollar, Danish krone, and Canadian dollar, could cause fluctuations in the reported results of our businesses' operations that could

negatively affect our results of operations. Additionally, the strengthening of certain currencies such as the euro and U.S. dollar potentially exposes us to competitive threats from lower cost producers in other countries. Our sales are translated into U.S. dollars for reporting purposes. The strengthening of the U.S. dollar could result in unfavorable translation effects as the results of foreign locations are translated into U.S. dollars.

• Our growth and results of operations may be adversely affected if we are unsuccessful in our capital allocation and acquisition program.

We expect to continue our strategy of seeking to acquire value creating add-on businesses that broaden our existing position and global reach as well as, in the right circumstances, strategically pursue larger acquisitions that could have the potential to either complement our existing businesses or allow us to pursue a new platform. However, there can be no assurance that we will be able to continue to find suitable businesses to purchase, that we will be able to acquire such businesses on acceptable terms, or that all closing conditions will be satisfied with respect to any pending acquisition. In addition, we face the risk that a completed acquisition may underperform relative to expectations. We may not achieve the synergies originally anticipated, may become exposed to unexpected liabilities or may not be able to sufficiently integrate completed acquisitions into our current business and growth model. Further, if we fail to allocate our capital appropriately, in respect of either our acquisition program or organic growth in our operations, we could be overexposed in certain markets and geographies and unable to expand into adjacent products or markets. These factors could potentially have an adverse impact on our consolidated results of operations, financial condition and cash flows.

• The indemnification provisions of acquisition and disposition agreements by which we have acquired or sold or disposed of companies may not fully protect us and may result in unexpected liabilities.

Certain of the acquisition agreements by which we have acquired companies require the former owners to indemnify us against certain liabilities related to the operation of those companies before we acquired them. In most of these agreements, however, the liability of the former owners is limited and certain former owners may be unable to meet their indemnification responsibilities. Similarly, the purchasers of our disposed operations may from time to time agree to indemnify us for operations of such businesses after the closing. We cannot be assured that any of these indemnification provisions will fully protect us, and as a result we may face unexpected liabilities that adversely affect our consolidated results of operations, financial condition and cash flows. In addition, we have retained certain liabilities directly or through indemnifications made to the buyers of businesses we have sold or disposed against known and unknown contingent liabilities such as tax liabilities and environmental matters.

There can be no assurance that the indemnity agreements will be sufficient to protect us against the full amount of any liabilities that may arise, or that the indemnitors will be able to fully satisfy their indemnification obligations. The failure to receive amounts for which we are entitled to indemnification could adversely affect our results of operations, cash flows and financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

The number, type, location and size of the properties used by our operations as of December 31, 2022 are shown in the following charts, by segment:

	Number and nature of facilities				Square footage (in 000s)	
	Manufacturing	Warehouse	Sales / Service	Total	Owned	Leased
Engineered Products	29	12	17	58	2,910	962
Clean Energy & Fueling	41	10	36	87	1,622	1,781
Imaging & Identification	10	8	46	64	625	825
Pumps & Process Solutions	37	17	26	80	2,587	1,172
Climate & Sustainability Technologies	19	10	19	48	1,534	2,501

	Locations				leased facilities (in years)		
	North America	Europe	Asia	Other	Total	Minimum	Maximum
Engineered Products	25	16	3	1	45	1	10
Clean Energy & Fueling	33	21	8	3	65	1	12
Imaging & Identification	8	28	17	4	57	1	11
Pumps & Process Solutions	34	21	14	1	70	1	12
Climate & Sustainability Technologies	17	12	6	2	37	1	11

Our owned and leased facilities are well-maintained and suitable for our operations.

ITEM 3. LEGAL PROCEEDINGS

See Note 16 — Commitments and Contingent Liabilities in the Consolidated Financial Statements in Item 8 of this Form 10-K

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

All of our officers are elected annually at the first meeting of the Board of Directors following our annual meeting of shareholders, and are subject to removal at any time by the Board of Directors. Our executive officers as of February 10, 2023, and their positions with Dover (and, where relevant, prior business experience) for the past five years, are as follows:

Name	Age	Positions Held and Prior Business Experience
Richard J. Tobin	59	President and Chief Executive Officer (since May 2018) and Director (since August 2016); prior thereto Chief Executive Officer (from 2013 to 2018) of CNH Industrial NV.
Kimberly K. Bors	62	Senior Vice President and Chief Human Resources Officer (since January 2020) of Dover; prior thereto Senior Vice President and Chief Human Resources Officer of The Mosaic Company (from July 2017 to December 2018); prior thereto Senior Vice President, Human Resources & Administration for Schneider, North America at Schneider Electric (September 2014 to June 2017).
Ivonne M. Cabrera	56	Senior Vice President, General Counsel and Secretary (since January 2013) of Dover.
Brad M. Cerepak	63	Senior Vice President and Chief Financial Officer (since May 2011) of Dover.
Girish Juneja	53	Senior Vice President and Chief Digital Officer (since May 2017) of Dover; prior thereto Senior Vice President/Chief Technology Officer and General Manager of the Marketplace Solutions Business of Altisource (from January 2014 to April 2017).
David J. Malinas	48	Senior Vice President, Operations (since July 2019) of Dover; prior thereto Senior Vice President and President, Industrial Process for ITT Corporation (from June 2017 to June 2019); prior thereto various leadership roles in Thermo Fisher Scientific Inc.'s Controlled Temperature Technologies Business, Industrial Segment, and Global Chemicals Business Unit between June 2012 and June 2017.
Anthony K. Kosinski	56	Vice President, Tax (since June 2016) of Dover; prior thereto Director, Domestic Tax (June 2003 to June 2016) of Dover.
James M. Moran	57	Vice President, Treasurer (since November 2015) of Dover; prior thereto Senior Vice President and Treasurer (from June 2013 to August 2015) of Navistar International Corporation ("NIC"); prior thereto Vice President and Treasurer (from 2008 to June 2013) of NIC; also served as Senior Vice President and Treasurer of Navistar, Inc. (from June 2013 to August 2015).
Ryan W. Paulson	49	Vice President and Controller (from July 2019) of Dover; prior thereto Assistant Controller, Global Consolidations and Operations Accounting (from August 2017 to July 2019); prior thereto partner at PricewaterhouseCoopers LLP (from July 2012 to June 2017).

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Dividends

The principal market in which Dover common stock is traded is the New York Stock Exchange.

Holders

As of January 31, 2023, there were 1,218 holders of record of Dover common stock.

Securities Authorized for Issuance Under Equity Compensation Plans

Information relating to securities authorized for issuance under our equity compensation plans is contained in Part III, Item 12 of this Form 10-K.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

In November 2020, the Company's Board of Directors approved a new standing share repurchase authorization, whereby we may repurchase up to 20 million shares beginning on January 1, 2021 through December 31, 2023. This share repurchase authorization replaced the February 2018 share repurchase authorization, there were 7,380,879 shares remaining.

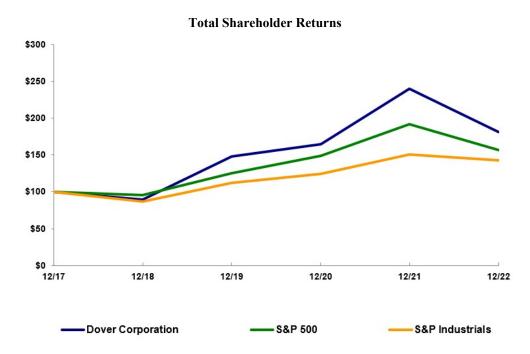
During 2022, the Company received a total of 3,892,295 shares upon completion of the accelerated share repurchase agreement (the "ASR Agreement") for \$500 million. The total number of shares ultimately repurchased under the ASR Agreement was based on the volume-weighted average share price of Dover's common stock during the calculation period of the ASR Agreement, less a discount, which was \$128.46 over the term of the ASR Agreement.

During the year ended December 31, 2022, the company repurchased, exclusive of the ASR Agreement, 641,428 shares of its common stock for a total cost of \$85 million, or \$132.52 per share. Exclusive of the ASR Agreement, no share repurchases were made under the November 2020 authorization during the three months ended December 31, 2022. As of December 31, 2022, 15,283,326 Shares remain authorized for repurchase under the November 2020 share repurchase authorization.

Performance Graph

This performance graph does not constitute soliciting material, is not deemed filed with the Securities and Exchange Commission ("SEC"), and is not incorporated by reference in any of our filings under the Securities Act of 1933 or the Exchange Act of 1934, whether made before or after the date of this Form 10-K and irrespective of any general incorporation language in any such filing, except to the extent we specifically incorporate this performance graph by reference therein.

Comparison of Five-Year Cumulative Total Return [†] Dover Corporation, S&P 500 Index, S&P 500 Industrials Index



Data Source: Research Data Group, Inc.

This graph assumes \$100 invested on December 31, 2017 in Dover common stock, the S&P 500 Index and the S&P 500 Industrials Index.

ITEM 6. [RESERVED]

Not required.

⁺Total return assumes reinvestment of dividends.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to help the reader understand our results of operations and financial condition for the years ended December 31, 2022, 2021 and 2020. The MD&A should be read in conjunction with our Consolidated Financial Statements and Notes included in Item 8 of this Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed elsewhere in this Form 10-K, particularly in Item 1A. "Risk Factors" and in the "Special Note Regarding Forward-Looking Statements" preceding Part I of this Form 10-K.

Throughout this MD&A, we refer to measures used by management to evaluate performance, including a number of financial measures that are not defined under accounting principles generally accepted in the United States of America ("GAAP"). Please see "Non-GAAP Disclosures" at the end of this Item 7 for further detail on these financial measures. We believe these measures provide investors with important information that is useful in understanding our business results and trends. Reconciliations within this MD&A provide more details on the use and derivation of these measures.

OVERVIEW

Dover Corporation is a diversified global manufacturer and solutions provider delivering innovative equipment and components, consumable supplies, aftermarket parts, software and digital solutions and support services.

For the year ended December 31, 2022, consolidated revenue was \$8.5 billion, an increase of \$0.6 billion or 7.6%, as compared to the prior year. This growth included organic revenue growth of 8.8% driven by solid underlying demand and our ability to produce and ship despite supply chain constraints and ongoing labor availability issues, as well as 4.2% acquisition-related growth, partially offset by an unfavorable impact from foreign currency translation of 3.9% and 1.5% impact from dispositions. Overall, customer pricing favorably impacted revenue by approximately 6.9% for the year compared to 2.8% in the prior year.

Within our Engineered Products segment, revenue increased \$262.8 million, or 14.8%, from the prior year, reflecting a broad-based organic revenue growth of 16.8% and acquisition-related growth of 0.7%, partially offset by an unfavorable foreign currency translation of 2.7%. The organic revenue growth was primarily driven by robust demand in our key end-markets, most notably in our vehicle service and industrial automation businesses, along with strategic pricing initiatives that more than offset significant inflationary cost headwinds in this segment.

Our Clean Energy & Fueling segment revenue increased \$230.4 million, or 14.0%, from prior year, reflecting acquisition-related growth of 18.1%, partially offset by an unfavorable impact from foreign currency translation of 3.8% and an organic decline of 0.3%. The organic revenue decline was primarily driven by reduced year-over-year demand in above ground retail fueling driven by customer construction delays in North America, roll-off of EMV-related demand and overall caution among operators in Europe and Asia as a result of the weakening macroeconomic environment.

Our Imaging & Identification segment revenue decreased \$39.6 million, or 3.4%, from the prior year, comprised of an unfavorable impact from foreign currency translation of 6.5%, partially offset by organic growth of 2.9% and acquisition-related growth of 0.2%. The organic revenue growth was primarily driven by solid activity in our marking and coding business, as underlying demand for our printers, spare parts, services and consumables remained positive.

Our Pumps & Process Solutions segment revenue increased \$19.6 million, or 1.1%, from the prior year, attributable to an organic growth of 4.1% and acquisition-related growth of 1.3%, partially offset by an unfavorable impact from foreign currency translation of 4.3%. The organic revenue growth was principally driven by pricing initiatives, along with continued strength in our core non-COVID-19 biopharma platform, industrial pumps, plastics and polymer processing solutions, and bearings and compression components businesses which all grew revenue driven by solid end market demand and strong backlogs.

Our Climate & Sustainability Technologies segment revenue increased \$129.5 million, or 8.1%, from the prior year, reflecting an organic revenue growth of 18.5%, offset by a disposition-related decline of 7.5% and an unfavorable impact

from foreign currency translation of 2.9%. The organic growth was driven by robust demand across all of our end-markets, along with strategic pricing initiatives that more than offset inflationary cost headwinds. Our beverage packaging equipment, heat exchanger, and retail refrigeration businesses all experienced broad-based growth from prior year.

From a geographic perspective, organic revenue for the U.S., our largest market, grew 9.5%, while revenue in Europe, Asia, and Other Americas grew 11.7%, 7.2%, and 6.9%, respectively. All other geographic markets declined 11.3% organically year over year. Three of our five segments had increased sales in North America, Europe, Asia, and Latin America as global demand continued to improve from easing of COVID-19 restrictions since the prior year.

Gross profit was \$3.1 billion for the year ended December 31, 2022, an increase of \$93.8 million, or 3.2%, as compared to the prior year. The increase was primarily due to pricing initiatives, which started in 2021, organic revenue growth, and favorable product mix, partially offset by increased material and logistics costs. Gross profit margin decreased to 36.0% for the year ended December 31, 2022 compared to 37.6% for the prior year. For further discussion related to our consolidated and segment results, see "Consolidated Results of Operations" and "Segment Results of Operations," respectively, within MD&A.

Bookings decreased 11.1% over the prior year to \$8.3 billion for the year ended December 31, 2022. This included an organic bookings decline of 10.0%, an unfavorable impact due to foreign currency translation of 3.1% and a 1.5% decline due to dispositions, partially offset by an increase of 3.5% in acquisition-related bookings. Bookings decreased organically across four of our five segments, driven primarily by the easing of supply chain disruptions resulting in normalization of order to delivery lead-times to pre-pandemic levels for most of our segments. Overall, our book-to-bill decreased from the prior year to 0.98. Backlog as of December 31, 2022 was \$3.0 billion, down from \$3.2 billion in the prior year. Backlog as of December 31, 2022 included \$1.1 billion, \$0.7 billion, \$0.7 billion, \$0.3 billion, and \$0.2 billion in the Climate & Sustainability Technologies, Engineered Products, Pumps & Process Solutions, Clean Energy & Fueling, and Imaging & Identification segments, respectively. Backlog remains elevated compared to historical levels and is expected to decrease due to normalizing lead-times and return to historical order patterns. See definition of bookings, organic bookings, book-to-bill and backlog within "Segment Results of Operations."

During the year ended December 31, 2022, we executed restructuring and other costs programs to further optimize operations. Restructuring and other costs of \$39.0 million included restructuring charges of \$30.5 million and other costs of \$8.5 million. The expenses were primarily due to headcount reductions and facility consolidations resulting from restructuring programs initiated in 2021 and 2022, as well as non-cash foreign currency translation losses due to substantial liquidation of businesses from certain Latin America countries in our Climate & Sustainability Technologies segment.

During the year ended December 31, 2022, we made a total of three business acquisitions totaling \$312.9 million, net of cash acquired and subject to contingent consideration. See Note 3 — Acquisitions in the Consolidated Financial Statements in Item 8 of this Form 10-K for further details regarding the businesses acquired during the year.

During 2022, the Company received a total of 3,892,295 shares upon completion of the accelerated share repurchase agreement (the "ASR Agreement") for \$500 million. The total number of shares ultimately repurchased under the ASR Agreement was based on the volume-weighted average share price of Dover's common stock during the calculation period of the ASR Agreement, less a discount, which was \$128.46 over the term of the ASR Agreement.

During the year ended December 31, 2022, the Company purchased, exclusive of the ASR Agreement, 641,428 shares of its common stock for a total cost of \$85 million, or \$132.52 per share. As of December 31, 2022, 15,283,326 shares remain authorized for repurchase under the November 2020 share repurchase authorization. For the 67th consecutive year, we increased our annual dividend per share and paid a total of \$287.6 million in dividends to our shareholders in 2022.

COVID-19

The COVID-19 outbreak and associated counter-acting measures implemented by governments and businesses around the world, as well as subsequent accelerated and robust recovery in global business activity, have increased uncertainty in the global business environment and led to supply chain disruptions and shortages in global markets for commodities, logistics and labor, as well as input cost inflation.

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While activity in most of the end markets we serve has improved since 2020, the demand in certain businesses such as textile printing, industrial winch and bearings and compression components is expected to take longer to recover to pre-pandemic levels, although continued improvement is expected in 2023. The uncertain recovery in demand has had business impacts, including increased material cost inflation (principally steel), labor availability issues and logistics costs increases. Some of our businesses have also been impacted by supplier component input availability issues. We cannot predict the ultimate impact from the COVID-19 pandemic and associated countermeasures on customer demand, our logistics costs, suppliers or the labor market.

The public health situation, continued global response measures and corresponding impacts on various markets remain fluid and uncertain and may lead to sudden changes in trajectory and outlook. We will continue to proactively respond to the situation and may take further actions that alter our business activity as may be required by governmental authorities, or that we determine are in the best interests of our employees and operations.

CONSOLIDATED RESULTS OF OPERATIONS

	Years	Ended Decemb	% / Point Change		
(dollars in thousands, except per share figures)	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenue	\$ 8,508,088	\$ 7,907,081	\$ 6,683,760	7.6 %	18.3 %
Cost of goods and services	5,444,532	4,937,295	4,209,741	10.3 %	17.3 %
Gross profit	3,063,556	2,969,786	2,474,019	3.2 %	20.0 %
Gross profit margin	36.0 %	37.6 %	37.0 %	(1.60)	0.60
Selling, general and administrative expenses	1,684,226	1,688,278	1,541,032	(0.2)%	9.6 %
Selling, general and administrative expenses as a percent of revenue	19.8 %	21.4 %	23.1 %	(1.60)	(1.70)
Operating earnings	1,379,330	1,281,508	932,987	7.6 %	37.4 %
Interest expense	116,456	106,319	111,937	9.5 %	(5.0)%
Interest income	(4,430)	(4,441)	(3,571)	(0.2)%	24.4 %
Gain on dispositions		(206,338)	(5,213)	nm*	nm*
Other income, net	(20,201)	(14,858)	(11,900)	36.0 %	24.9 %
Earnings before provision for income taxes	1,287,505	1,400,826	841,734	(8.1)%	66.4 %
Provision for income taxes	222,129	277,008	158,283	(19.8)%	75.0 %
Effective tax rate	17.3 %	19.8 %	18.8 %	(2.5)	1.0
Net earnings	\$ 1,065,376	\$ 1,123,818	\$ 683,451	(5.2)%	64.4 %
Net earnings per common share - diluted	\$ 7.42	\$ 7.74	\$ 4.70	(4.1)%	64.7 %

*nm: not meaningful

Revenue

For the year ended December 31, 2022, revenue increased \$0.6 billion, or 7.6% to \$8.5 billion compared with 2021, reflecting organic growth of 8.8% driven by solid underlying demand and our ability to produce and ship despite supply chain constraints and ongoing labor availability issues. Acquisition-related growth increased by 4.2% led by our Clean Energy & Fueling segment, offset by an unfavorable foreign currency translation impact of 3.9% and disposition-related decline of 1.5%. Overall, customer pricing favorably impacted revenue by 6.9% for the year ended December 31, 2022.

For the year ended December 31, 2021, revenue increased \$1.2 billion, or 18.3% to \$7.9 billion compared with 2020, reflecting an organic growth of 15.3%, driven by strong demand across all our segments reflecting robust macro-trends. Acquisition-related growth increased by 1.3% led by our Clean Energy & Fueling and Imaging & Identification segments, partially offset by a 0.2% decrease from dispositions mainly due to the sale of our Unified Brands ("UB") business within Climate & Sustainability Technologies segment. Revenue also increased due to favorable foreign currency translation impact of 1.9%. Overall, customer pricing favorably impacted revenue by 2.8% for the year ended December 31, 2021.

Gross Profit

For the year ended December 31, 2022, gross profit increased \$93.8 million, or 3.2%, to \$3.1 billion compared with 2021, primarily due to organic revenue growth, partially offset by increased material and logistics costs. Gross profit margin decreased 160 basis points to 36.0% as compared to the prior year reflecting a shift in operating mix driven by biopharma and subdued above ground retail fueling performance returning to historical levels, partially offset by growth in CO² refrigeration systems and engineered products.

For the year ended December 31, 2021, gross profit increased \$495.8 million, or 20.0% to \$3.0 billion compared with 2020, primarily due to organic revenue growth, benefits from pricing and productivity initiatives and restructuring actions, partially offset by increased material, labor and logistics costs as well as production inefficiencies caused by component and labor availability constraints. Gross profit margin increased 60 basis points to 37.6% as compared to the prior year due to benefits from pricing and product mix, productivity and restructuring actions.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the year ended December 31, 2022, decreased \$4.1 million, or 0.2% to \$1.7 billion compared with 2021, primarily due to lower variable compensation expense, partially offset by higher travel and marketing expenses. As a percentage of revenue, selling, general and administrative expenses decreased 160 basis points to 19.8%, reflecting an increase in the revenue base.

Selling, general and administrative expenses for the year ended December 31, 2021, increased \$147.2 million, or 9.6% to \$1.7 billion compared with 2020, due to higher labor and acquisition-related costs and lower discretionary spend in the prior year partially offset by lower restructuring costs of \$11.8 million. As a percentage of revenue, selling, general and administrative expenses decreased 170 basis points in 2021 to 21.4%, reflecting an increase in the revenue base.

Research and development costs, including qualifying engineering costs, are expensed when incurred and amounted to \$163.3 million, \$157.8 million and \$142.1 million for the years ended December 31, 2022, 2021 and 2020, respectively. These costs as a percent of revenue were 1.9%, 2.0% and 2.1% for the years December 31, 2022, 2021 and 2020, respectively.

Non-Operating Items

Interest Expense, net

For the year ended December 31, 2022, interest expense, net of interest income, increased \$10.1 million, or 10.0%, to \$112.0 million compared with 2021 primarily due to increased commercial paper borrowings and higher average interest rates since the prior year.

For the year ended December 31, 2021, interest expense, net of interest income, decreased \$6.5 million, or 6.0%, to \$101.9 million compared with 2020 primarily due to borrowings against our unsecured revolving credit facility and commercial paper in 2020 to ensure liquidity during height of pandemic-related impacts.

Gain on Dispositions

There was one immaterial disposition in 2022.

On December 1, 2021, we completed the sale of UB, a wholly owned subsidiary of Dover. We recognized a total consideration of \$229.0 million. This sale resulted in a pre-tax gain on disposition of \$181.6 million included within the consolidated statements of earnings and within the Climate & Sustainability Technologies segment for the year ended December 31, 2021. The sale did not represent a strategic shift that had a major effect on operations and financial results and, therefore, did not qualify for presentation as a discontinued operation. Additionally, included in this line item was a \$24.7 million gain related to the disposition of our equity method investment in Race Winning Brands ("RWB") during the year ended December 31, 2021.

Refer to Note 4 — Dispositions in the Consolidated Financial Statements in Item 8 of this Form 10-K for additional information on disposed and discontinued operations.

Other Income, net

For the years ended December 31, 2022, 2021 and 2020, other income, net was \$20.2 million, \$14.9 million and \$11.9 million, respectively. For the year ended December 31, 2022, other income increased compared to 2021 primarily due to increased earnings from our equity method investments, partially offset by deferred compensation plan investment losses resulting from market volatility in 2022. For the year ended December 31, 2021, other income increased compared to 2020 primarily due to transition services in connection with our sale of UB, certain non-income tax credits, and investment income, partially offset by a \$12.1 million other than temporary impairment charge related to an equity method investment in 2021.

Income Taxes

Our businesses have a global presence with 43%, 40% and 45% of our pre-tax earnings in 2022, 2021 and 2020, respectively, generated in foreign jurisdictions. Foreign earnings are generally subject to local country tax rates that differ from the 21.0% U.S. statutory tax rate. Our effective foreign tax rate is typically lower than the U.S. statutory tax rate.

Our effective tax rate was 17.3% for the year ended December 31, 2022, compared to 19.8% and 18.8% for the years ended December 31, 2021 and December 31, 2020, respectively. The 2022 rate was primarily driven by favorable audit resolutions, including a reduction to income taxes previously recorded related to the Tax Cut and Jobs Act, and the 2021 and 2020 rates were primarily driven by favorable audit resolutions and the tax benefit of share award exercises.

See Note 14 — Income Taxes in the Consolidated Financial Statements in Item 8 of this Form 10-K for additional details.

Net Earnings

For the year ended December 31, 2022, net earnings decreased \$58.4 million, or 5.2%, to \$1,065.4 million, or \$7.42 per share, compared with net earnings of \$1,123.8 million, or \$7.74 per share, for the year ended December 31, 2021. Earnings decreased due to the prior year earnings being favorably impacted by the gains on disposition of UB and our equity method investment in RWB compared to one immaterial disposition in 2022. Excluding these gains, earnings increased due to pricing initiatives, which started in 2021, organic revenue growth, and favorable product mix, partially offset by increased material, logistics and labor costs.

For the year ended December 31, 2021, net earnings increased \$440.4 million, or 64.4%, to \$1,123.8 million, or \$7.74 per share, compared with net earnings of \$683.5 million, or \$4.70 per share, for the year ended December 31, 2020. Earnings increased due to organic revenue growth, favorable pricing actions and product mix and productivity actions including benefits of restructuring actions. Additionally, earnings were favorably impacted by the gains on disposition of UB and our equity method investment in RWB. These benefits more than offset increases in material and logistics costs, most notably steel and ocean and air freight costs, higher labor costs as well as productivity shortfalls resulting from labor constraints and supply chain disruption.

SEGMENT RESULTS OF OPERATIONS

The summary that follows provides a discussion of the results of operations of each of our five reportable operating segments (Engineered Products, Clean Energy & Fueling, Imaging & Identification, Pumps & Process Solutions, and Climate & Sustainability Technologies). Each of these segments is comprised of various product and service offerings that serve multiple markets. During the year ended December 31, 2022, the segment measure of profit and loss, used by the Company's Chief Operating Decision Maker to evaluate our operating segment performance, was changed to segment earnings from segment earnings (EBIT) defined as earnings before corporate expenses/other, interest expense, interest income and provision for income taxes. Segment earnings is defined as earnings before purchase accounting expenses, restructuring and other costs, loss (gain) on dispositions, corporate expenses/other, interest expense, interest income and provision for income taxes. Accordingly, we have updated our segment earnings for the years ended December 31, 2021 and 2020 to conform to the new presentation. Refer to Note 19 — Segment Information in the Consolidated Financial Statements in Item 8 of this Form 10-K and see "Non-GAAP Disclosures" at the end of this Item 7 for further details.

Additionally, we use the following operational metrics in monitoring the performance of the business. We believe the operational metrics are useful to investors and other users of our financial information in assessing the performance of our segments:

- Bookings represent total orders received from customers in the current reporting period. This metric is an important measure of performance and an indicator of revenue order trends.
- Organic bookings represent total orders received from customers in the current reporting period excluding the
 impact of foreign currency exchange rates and the impact of acquisitions and dispositions. The metric is an
 important measure of performance and an indicator of revenue order trends.
- Backlog represents an estimate of the total remaining bookings at a point in time for which performance obligations
 have not yet been satisfied. This metric is useful as it represents the aggregate amount we expect to recognize as
 revenue in the future.
- Book-to-bill is a ratio of the amount of bookings received from customers during a period divided by the amount of revenue recorded during that same period. This metric is a useful indicator of demand.

Engineered Products

Our Engineered Products segment provides a wide range of equipment, components, software, solutions and services to the vehicle aftermarket, waste handling, industrial automation, aerospace and defense, industrial winch and hoist, and fluid dispensing end-markets.

	Year	s Ended Decem	ber 31,	% Change	
(dollars in thousands)	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenue	\$2,043,632	\$1,780,827	\$1,531,277	14.8 %	16.3 %
Segment earnings	\$ 346,519	\$ 277,852	\$ 265,143	24.7 %	4.8 %
Segment margin	17.0 %	15.6 %	17.3 %		
Operational metrics:					
Bookings	\$2,004,326	\$2,113,729	\$1,558,486	(5.2)%	35.6 %
Backlog	\$ 720,114	\$ 785,085	\$ 463,701	(8.3)%	69.3 %
Components of revenue growth:					
Organic growth				16.8 %	14.1 %
Acquisitions				0.7 %	0.6 %
Foreign currency translation				(2.7)%	1.6 %
Total revenue growth				14.8 %	16.3 %

2022 Versus 2021

Engineered Products segment revenue for the year ended December 31, 2022 increased \$262.8 million, or 14.8% compared to the prior year, comprised of a broad-based organic revenue growth of 16.8% and acquisition-related growth of 0.7%, partially offset by an unfavorable foreign currency translation of 2.7%. Overall, customer pricing favorably impacted revenue by approximately 10.4% in 2022 compared to 4.2% in the prior year.

The organic revenue growth was primarily driven by robust demand across all of our key end-markets, most notably in our vehicle service, waste handling, industrial automation, aerospace and defense, and industrial winch and hoist businesses, along with strategic pricing initiatives that more than offset inflationary cost headwinds. Despite the strong organic growth, shipments continued to be challenged by supply chain constraints, most notably in our waste handling business. We expect organic growth rates in 2023 to remain strong, but at levels below the growth we saw in 2022.

Engineered Products segment earnings for the year ended December 31, 2022 increased \$68.7 million, or 24.7%, compared to the prior year. Segment margin increased to 17.0% from 15.6% in the prior year driven by increased volumes, customer pricing actions, and productivity gains, partially offset by higher material, labor and logistics costs as well as an unfavorable impact from foreign currency translation.

Bookings for the year ended December 31, 2022 decreased 5.2% compared to the prior year, comprised primarily of organic decline of 4.7% and an unfavorable impact from foreign currency translation of 1.8%, offset by acquisition-related growth of 1.3%. The organic bookings decline was driven primarily by the easing of supply chain disruptions resulting in shortened order to delivery lead-times and customers returning to more traditional order patterns, most notably in our vehicle service business. Segment book-to-bill was 0.98. Backlog decreased 8.3% compared to the prior year.

2021 Versus 2020

Engineered Products segment revenue for the year ended December 31, 2021 increased \$249.6 million, or 16.3% compared to the prior year, comprised of a broad-based organic revenue growth of 14.1%, a favorable foreign currency translation of 1.6%, and acquisition-related growth of 0.6%. Overall, customer pricing favorably impacted revenue by approximately 4.2% in 2021.

The organic revenue growth was primarily driven by robust demand across all of our key end-markets, most notably in our vehicle service and industrial automation businesses, and strategic pricing initiatives that partially offset inflationary headwinds. Despite the strong organic growth and record high backlog levels, certain shipments in our waste handling and vehicle service groups were deferred to future quarters as a result of supply chain and labor availability constraints with the most significant impact in the fourth quarter of 2021.

Engineered Products segment earnings for the year ended December 31, 2021 increased \$12.7 million, or 4.8%, compared to the prior year. The increase was primarily driven by conversion on increased volumes, benefits from restructuring actions, and favorable impact from foreign currency translation, partially offset by higher material and logistics costs, most notably steel and ocean and air freight costs, as well as plant productivity shortfalls resulting from supply chain disruption and higher labor costs. Segment margin decreased from 17.3% to 15.6% as compared to the prior year.

Clean Energy & Fueling

Our Clean Energy & Fueling segment provides components, equipment, software, solutions and services enabling safe and reliable storage, transport and dispensing of traditional and clean fuels (including liquefied natural gas, hydrogen, and electric vehicle charging), cryogenic gases, and other hazardous substances along the supply chain, and safe and efficient operation of convenience retail, retail fueling and vehicle wash establishments, as well as facilities where cryogenic gases are produced, stored or consumed.

	Years Ended December 31,					
(dollars in thousands)	2022	2021	2020	2022 vs. 2021	2021 vs. 2020	
Revenue	\$1,878,507	\$1,648,153	\$1,476,282	14.0 %	11.6 %	
Segment earnings	\$ 352,993	\$ 327,186	\$ 290,233	7.9 %	12.7 %	
Segment margin	18.8 %	19.9 %	6 19.7 %			
Operational metrics:						
Bookings	\$1,821,025	\$1,742,479	\$1,471,870	4.5 %	18.4 %	
Backlog	\$ 312,142	\$ 383,572	\$ 201,521	(18.6)%	90.3 %	
Components of revenue growth (decline):						
Organic growth (decline)				(0.3)%	5.8 %	
Acquisitions				18.1 %	3.6 %	
Foreign currency translation				(3.8)%	2.2 %	
Total revenue growth				14.0 %	11.6 %	

2022 Versus 2021

Clean Energy & Fueling segment revenue for the year ended December 31, 2022 increased \$230.4 million, or 14.0%, compared to the prior year, attributable to acquisition-related growth of 18.1%, partially offset by an unfavorable impact from foreign currency translation of 3.8% and an organic decline of 0.3%. Acquisition-related growth was driven by the acquisition of RegO, Acme Cryogenics and LIQAL, which were completed in 2021. Overall, customer pricing favorably impacted revenue by approximately 6.0% in 2022 compared to 2.3% in the prior year.

The organic revenue decline was primarily driven by reduced year-over-year demand in above ground retail fueling driven by customer construction delays in North America, roll-off of EMV-related demand and overall caution among operators in Europe and Asia as a result of the weakening macroeconomic environment. This was mostly offset by solid demand in our below ground retail fueling, fluid transfer solutions and vehicle wash solutions business, along with pricing actions aimed at mitigating material and logistics cost inflation. In light of market conditions, we have made and will continue to make proactive adjustments to our cost structure through restructuring and other programs to align with current demand trends. We expect organic growth rates to remain restrained in the early part of 2023, but show improvement as we move through 2023.

Clean Energy & Fueling segment earnings for the year ended December 31, 2022 increased \$25.8 million, or 7.9%, compared to the prior year. The increase was primarily driven by pricing, productivity initiatives, cost actions in above ground fueling, and the favorable impact from acquisitions, which more than offset the unfavorable impact to earnings from foreign currency translation, reduced volumes in above ground retail fueling, and increased material, logistics and labor costs. Segment margin decreased to 18.8% from 19.9% in the prior year.

Bookings for the year ended December 31, 2022 increased 4.5% compared to the prior year, reflecting acquisition-related growth of 15.9%, partially offset by an organic decline of 8.8% and an unfavorable impact from foreign currency translation of 2.6%. The organic bookings decline was primarily driven by improving lead-times and return to historical order patterns

throughout the segment, as well as the decrease in demand in above ground retail fueling. Segment book-to-bill was 0.97. Backlog decreased 18.6% as compared to the prior year.

2021 Versus 2020

Clean Energy & Fueling segment revenue for the year ended December 31, 2021 increased \$171.9 million, or 11.6%, compared to the prior year, attributable to organic growth of 5.8%, acquisition-related growth of 3.6%, and a favorable impact from foreign currency translation of 2.2%. Acquisition-related growth was driven by the acquisition of ICS, AvaLAN and LIQAL. The acquisitions of RegO and Acme Cryogenics late in the fourth quarter had an immaterial impact to the segment's results. Overall, customer pricing favorably impacted revenue by approximately 2.3% in 2021.

The organic revenue growth was primarily driven by solid demand in our North America and EMEA retail fueling and vehicle wash businesses, along with pricing actions aimed at mitigating material, logistics and labor cost inflation. Growth in this segment was hampered by supply chain and labor availability challenges, both within our and our customers' operations, that intensified in the second half of the year, impacting our ability to ship some customer orders.

Clean Energy & Fueling segment earnings for the year ended December 31, 2021 increased \$37.0 million, or 12.7%, compared to the prior year. The increase was primarily driven by conversion on organic revenue growth, pricing initiatives, productivity actions, and a favorable impact from acquisitions, partially offset by material and labor cost inflation. Segment margin increased to 19.9% from 19.7% in the prior year.

Imaging & Identification

Our Imaging & Identification segment supplies precision marking and coding, product traceability, brand protection and digital textile printing equipment, as well as related consumables, software and services to the global packaged and consumer goods, pharmaceutical, industrial manufacturing, textile and other end-markets.

Years	Ended Decemb	oer 31,	% Cha	inge
2022	2021	2020	2022 vs. 2021	2021 vs. 2020
\$1,123,815	\$1,163,367	\$1,038,178	(3.4)%	12.1 %
\$ 268,084	\$ 266,932	\$ 224,033	0.4 %	19.1 %
23.9 %	22.9 %	21.6 %		
\$1,154,199	\$1,190,404	\$1,065,098	(3.0)%	11.8 %
\$ 232,812	\$ 212,098	\$ 192,785	9.8 %	10.0 %
			2.9 %	8.0 %
			0.2 %	1.3 %
			(6.5)%	2.8 %
			(3.4)%	12.1 %
	2022 \$1,123,815 \$ 268,084 23.9 % \$1,154,199	2022 2021 \$1,123,815 \$1,163,367 \$ 268,084 \$ 266,932 23.9 % 22.9 % \$1,154,199 \$1,190,404	\$1,123,815 \$1,163,367 \$1,038,178 \$ 268,084 \$ 266,932 \$ 224,033 23.9 % 22.9 % 21.6 % \$1,154,199 \$1,190,404 \$1,065,098	2022 2021 2020 2021 \$1,123,815 \$1,163,367 \$1,038,178 (3.4)% \$ 268,084 \$ 266,932 \$ 224,033 0.4 % 23.9 % 22.9 % 21.6 % \$1,154,199 \$1,190,404 \$1,065,098 (3.0)% \$ 232,812 \$ 212,098 \$ 192,785 9.8 % 2.9 % 0.2 % (6.5)%

2022 Versus 2021

Imaging & Identification segment revenue for the year ended December 31, 2022 decreased \$39.6 million, or 3.4% compared to the prior year, comprised of an unfavorable impact from foreign currency translation of 6.5%, partially offset by organic growth of 2.9% and acquisition-related growth of 0.2%. Overall, customer pricing favorably impacted revenue by approximately 4.1% in 2022 compared to 0.9% in the prior year.

The organic revenue growth was primarily driven by solid activity in our marking and coding business, as underlying demand for our printers, spare parts, services and consumables remains positive, along with the favorable impact from pricing actions aimed at mitigating material and logistics cost inflation. We also saw improvements in component availability as we moved through the second half of 2022. We expect demand in our marking and coding business to remain constructive in 2023. New textile printer sales remain impacted by high energy prices and macro uncertainty in textile producing regions.

Imaging & Identification segment earnings for the year ended December 31, 2022 increased \$1.2 million, or 0.4%, compared to the prior year. This increase was driven by pricing initiatives, organic revenue growth, productivity actions, and product mix, partially offset by the unfavorable impact to earnings from foreign currency translation, and increased material, logistics and labor costs. As a result, segment margin increased to 23.9% from 22.9% in the prior year.

Segment bookings for the year ended December 31, 2022 decreased 3.0% compared to the prior year, reflecting an unfavorable impact from foreign currency translation of 5.8%, partially offset by organic growth of 2.6% and acquisition-related growth of 0.2%. The organic increase was primarily driven by solid demand for new equipment, spare parts, services and consumables in our marking and coding business. Segment book-to-bill was 1.03. Backlog increased 9.8% compared to the prior year.

2021 Versus 2020

Imaging & Identification segment revenue for the year ended December 31, 2021 increased \$125.2 million, or 12.1% compared to the prior year, comprised of organic growth of 8.0%, a favorable impact from foreign currency translation of 2.8%, and acquisition-related growth of 1.3%. Acquisition-related growth was driven by the acquisitions of Solaris in the third quarter of 2020 and Blue Bite in the second quarter of 2021. Overall, customer pricing favorably impacted revenue by approximately 0.9% in 2021.

The organic revenue growth was driven by both our marking and coding business, and our digital textile printing business. Our marking and coding business delivered solid growth in new equipment and associated services and consumables, as well as serialization software sales. Our digital textile printing business experienced demand recovery in 2021 compared to 2020 when demand for printed textiles was significantly reduced due to the impact of COVID-19 restrictions on the global apparel industry. While 2021 global apparel retail volumes improved from 2020, volumes had not yet returned to pre-pandemic levels and continue to be impacted by local business and travel restrictions, as well as work-from-home policies which resulted in reduced apparel demand.

Imaging & Identification segment earnings for the year ended December 31, 2021 increased \$42.9 million, or 19.1%, compared to the prior year. This increase was driven by conversion on organic revenue growth, pricing initiatives and the benefits from productivity initiatives and restructuring actions, partially offset by material and labor cost inflation. As a result, segment margin increased to 22.9% from 21.6% in the prior year.

Pumps & Process Solutions

Our Pumps & Process Solutions segment manufactures specialty pumps and flow meters, highly engineered precision components for rotating and reciprocating machines, fluid connecting solutions and plastics and polymer processing equipment, serving single-use biopharmaceutical production, diversified industrial manufacturing, chemical production, plastics and polymer processing, midstream and downstream oil and gas and other end-markets.

	Years	Ended Decen	nber 31,	% Cha	ange
(dollars in thousands)	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenue	\$1,728,235	\$1,708,634	\$1,324,003	1.1 %	29.1 %
Segment earnings	\$ 533,018	\$ 575,593	\$ 348,733	(7.4)%	65.1 %
Segment margin	30.8 %	33.7 %	6 26.3 %		
Operational metrics:					
Bookings	\$1,709,204	\$2,023,061	\$1,334,338	(15.5)%	51.6 %
Backlog	\$ 686,512	\$ 688,931	\$ 390,238	(0.4)%	76.5 %
Components of revenue growth:					
Organic growth				4.1 %	26.6 %
Acquisitions				1.3 %	0.6 %
Foreign currency translation				(4.3)%	1.9 %
Total revenue growth				1.1 %	29.1 %

2022 Versus 2021

Pumps & Process Solutions segment revenue for the year ended December 31, 2022 increased \$19.6 million, or 1.1%, compared to the prior year, attributable to organic growth of 4.1% and acquisition-related growth of 1.3%, partially offset by an unfavorable impact from foreign currency translation of 4.3%. Acquisition-related growth was driven by the acquisitions of AMN DPI and Malema in 2022. Overall, customer pricing favorably impacted revenue by approximately 3.9% in 2022 compared to 1.8% in the prior year.

The organic revenue growth was driven by pricing initiatives, along with continued strength in our core non-COVID-19 biopharma platform, industrial pumps, plastics and polymer processing solutions, and bearings and compression components businesses, which all grew revenue driven by solid end market demand and strong backlogs. Revenue from shipments of single-use pumps and connectors used in biopharmaceutical production processes declined in 2022, as biopharmaceutical manufacturers reduced orders for components used in COVID-19 vaccine production and repurposed inventory purchased for the COVID-19 vaccine production towards production of non-COVID-19 therapies. While underlying demand for non-COVID-19 related biologic therapies remains on a positive trajectory in the biopharmaceutical market, we expect our delivery volumes to remain muted in early 2023 as customers work through component inventories. Improvement in shipments is expected as we move through 2023 as customer component inventories normalize and growth in non-COVID-19 related bioproduction remains robust.

Pumps & Process Solutions segment earnings for the year ended December 31, 2022 decreased \$42.6 million, or 7.4%, compared to the prior year. The decrease was primarily driven by the impact of reduced revenues relating to single use components used in COVID-19 vaccine production, along with material and labor cost inflation and foreign currency translation headwinds. This was partially offset by pricing initiatives, conversion on increased revenues in industrial pumps, plastics and polymer processing solutions, and bearings and compression components, productivity actions, and restructuring benefits. Segment margin decreased to 30.8% from 33.7% in the prior year.

Bookings for the year ended December 31, 2022 decreased 15.5% compared to the prior year, reflecting an organic decline of 12.8% and an unfavorable impact from foreign currency translation of 3.8%, partially offset by acquisition-related growth of 1.1%. The organic bookings decline was driven by a decrease in orders for biopharmaceutical components used in COVID-19 vaccine production, partially offset by continued strong order intake in our plastics and polymer processing solutions and bearings and compression components businesses. Segment book-to-bill was 0.99. Backlog decreased 0.4% compared to the prior year.

2021 Versus 2020

Pumps & Process Solutions segment revenue for the year ended December 31, 2021 increased \$384.6 million, or 29.1%, compared to the prior year, attributable to organic growth of 26.6%, a favorable impact from foreign currency translation of 1.9%, and acquisition-related growth of 0.6%. Acquisition-related growth was primarily driven by the acquisition of Quantex and one other immaterial acquisition. Overall, customer pricing favorably impacted revenue by approximately 1.8% in 2021.

The organic revenue growth was primarily driven by robust demand in the biopharma and hygienic markets, where we saw strong demand for single use pumps and connectors used in biopharmaceutical production processes. Our industrial pumps and our plastics and polymer processing solutions businesses also contributed to top-line growth responding to strong end market demand, despite experiencing supply chain constraints and customer delivery challenges that accelerated in the second half of the year. Revenue in bearings and compression components saw solid growth amidst an ongoing recovery in their end market demand.

Pumps & Process Solutions segment earnings for the year ended December 31, 2021 increased \$226.9 million, or 65.1%, compared to the prior year. This increase was predominantly the result of strong conversion on revenue growth, favorable product mix, pricing initiatives, and productivity actions, partially offset by material and labor cost inflation, and investments in growth. Segment margin increased to 33.7% from 26.3% in the prior year.

Climate & Sustainability Technologies

Our Climate & Sustainability Technologies segment is a provider of innovative and energy-efficient equipment, components and parts for the commercial refrigeration, equipment and systems, heating and cooling and beverage can-making equipment markets.

	Years	s Ended Decem	ber 31,	% Cha	ange
(dollars in thousands)	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenue	\$1,737,724	\$1,608,175	\$1,316,090	8.1 %	22.2 %
Segment earnings	\$ 254,484	\$ 185,517	\$ 126,093	37.2 %	47.1 %
Segment margin	14.6 %	11.5 %	9.6 %		
Operational metrics:					
Bookings	\$1,659,773	\$2,317,000	\$1,510,499	(28.4)%	53.4 %
Backlog	\$1,068,644	\$1,174,479	\$ 510,498	(9.0)%	130.1 %
Components of revenue growth:					
Organic growth				18.5 %	22.0 %
Dispositions				(7.5)%	(1.1)%
Foreign currency translation				(2.9)%	1.3 %
Total revenue growth				8.1 %	22.2 %

2022 Versus 2021

Climate & Sustainability Technologies segment revenue for the year ended December 31, 2022 increased \$129.5 million, or 8.1%, compared to the prior year, reflecting an organic revenue growth of 18.5%, offset by disposition-related decline of 7.5% and an unfavorable impact from foreign currency translation of 2.9%. Overall, customer pricing favorably impacted revenue by approximately 9.2% in 2022 compared to 4.1% in the prior year.

The organic revenue growth was principally driven by robust demand across all of our end-markets, along with pricing initiatives that more than offset inflationary cost headwinds. Beverage packaging equipment revenues increased substantially from prior year, driven by continued favorable macro trends in the global beverage industry, which include beverage innovations and producers increasingly shifting to highly recyclable aluminum cans for environmental sustainability and merchandising benefits offered by modern aluminum containers. Our heat exchanger business experienced strong growth across all regions, fueled by regulation-driven heat pump demand in Europe, robust demand in Asia, and strengthening commercial HVAC and industrial markets globally. Retail refrigeration experienced broad-based growth, driven by increased remodel activity with key supermarket customers and growing demand for our environmentally friendly natural refrigerant systems in both Europe and the U.S. We expect organic growth rates in 2023 to remain strong, but at levels below the growth we saw in 2022.

Climate & Sustainability Technologies segment earnings for the year ended December 31, 2022 increased \$69.0 million, or 37.2%, compared to the prior year. Segment margin increased to 14.6% from 11.5% in the prior year driven by increased volumes, favorable business mix and customer pricing actions, partially offset by increased material and logistics costs, most notably metals and freight, increased energy and labor costs, and plant productivity shortfalls resulting from supply chain disruption.

Bookings for the year ended December 31, 2022 decreased 28.4% compared to the prior year, reflecting organic decline of 19.7%, a disposition-related decline of 6.1%, and an unfavorable impact from foreign currency translation of 2.6%. The organic bookings decline includes a \$74.0 million reversal of an order slated for 2023 completion in our beverage can-

making business due to customer financing limitations, along with the easing of supply chain disruption, resulting in improved order to delivery lead-times and a return to more traditional customer order patterns, most notably in retail refrigeration. Segment book-to-bill was 0.96. Backlog decreased 9.0% over the prior year, principally driven by our aluminum can-making equipment business.

2021 Versus 2020

Climate & Sustainability Technologies segment revenue for the year ended December 31, 2021 increased \$292.1 million, or 22.2%, compared to the prior year, reflecting an organic revenue growth of 22.0% and a favorable impact from foreign currency translation of 1.3%, partially offset by a disposition-related decline of 1.1%. Overall, customer pricing favorably impacted revenue by approximately 4.1% in 2021.

The organic revenue growth was principally driven by robust demand across all of our end-markets. Beverage packaging equipment revenues increased substantially from prior year, driven by continued favorable macro trends in the global beverage industry, which include beverage innovations and producers increasingly shifting to highly recyclable aluminum cans for environmental sustainability and merchandising benefits offered by modern aluminum cans. Our heat exchanger business experienced strong growth across all regions, fueled by regulation-driven heat pump demand in Europe, robust demand in Asia, and strengthening commercial HVAC and industrial markets globally. Retail refrigeration experienced broad-based growth, driven by increased remodel activity with key supermarket customers and growing demand for our environmentally friendly natural refrigerant systems in both Europe and the U.S. Prior to the sale of UB in the fourth quarter of 2021, commercial foodservice equipment revenues improved over the prior year, as many key restaurant chain customers resumed store investment programs once government mandated COVID-19 restrictions eased in 2021.

Climate & Sustainability Technologies segment earnings for the year ended December 31, 2021 increased \$59.4 million, or 47.1%, compared to the prior year. Segment margin increased to 11.5% from 9.6% in the prior year due to increased volumes, favorable mix, improved operational efficiencies and benefits from prior restructuring programs; partially offset by increased material and logistics costs, most notably metals, and plant productivity shortfalls resulting from supply chain disruption, most notably from intermittent shortages of insulation foam materials throughout the year, and labor availability constraints, most significantly in our retail refrigeration business.

Reconciliation of Segment Earnings to Net Earnings

	Years Ended December 31,									
(dollars in thousands)	<u> </u>	2022		2021		2020				
Net earnings:										
Segment earnings:										
Engineered Products	\$	346,519	\$	277,852	\$	265,143				
Clean Energy & Fueling		352,993		327,186		290,233				
Imaging & Identification		268,084		266,932		224,033				
Pumps & Process Solutions		533,018		575,593		348,733				
Climate & Sustainability Technologies		254,484		185,517		126,093				
Total segment earnings	<u> </u>	1,755,098		1,633,080		1,254,235				
Purchase accounting expenses (1)		181,103		141,980		138,515				
Restructuring and other costs (2)		38,990		38,436		51,472				
Loss (gain) on dispositions (3)		194		(206,338)		(5,213)				
Corporate expense / other (4)		135,280		156,298		119,361				
Interest expense		116,456		106,319		111,937				
Interest income		(4,430)		(4,441)		(3,571)				
Earnings before provision for income taxes		1,287,505		1,400,826		841,734				
Provision for income taxes		222,129		277,008		158,283				
Net earnings	\$	1,065,376	\$	1,123,818	\$	683,451				

⁽¹⁾ Purchase accounting expenses are primarily comprised of amortization of intangible assets and charges related to fair value step-ups for acquired inventory sold during the period.

Restructuring and Other Costs (Benefits)

Restructuring and other costs (benefits) are not presented in our segment earnings because these costs are excluded from the segment operating performance measure reviewed by management. During the year ended December 31, 2022, restructuring charges of \$30.5 million were primarily due to headcount reductions and facility consolidations resulting from restructuring programs initiated in 2021 and 2022, including non-cash foreign currency translation losses due to substantial liquidation of businesses. Other costs (benefits), net of \$8.5 million, were primarily due to an asset impairment in our Engineered Products segment and write-off of assets in connection with an exit from certain Latin America countries in our Climate & Sustainability Technologies segment. These restructuring and other charges were recorded in cost of goods and services and selling, general and administrative expenses in the consolidated statement of earnings. Additional programs beyond the scope of the announced programs may be implemented during 2023 with related restructuring charges.

We recorded the following restructuring and other costs for the year ended December 31, 2022:

	 Year Ended December 31, 2022												
(dollars in thousands)	 gineered oducts	Er	Clean nergy & Yueling		maging & entification	P	imps & Process olutions	Su	Climate & stainability echnologies	Co	orporate		Total
Restructuring	\$ 3,194	\$	9,571	\$	4,702	\$	4,685	\$	6,007	\$	2,321	\$	30,480
Other costs (benefits), net	3,260		(13)		1,740		(2)		3,263		262		8,510
Restructuring and other costs	\$ 6,454	\$	9,558	\$	6,442	\$	4,683	\$	9,270	\$	2,583	\$	38,990

⁽²⁾ Restructuring and other costs relate to actions taken for headcount reductions, facility consolidations and site closures, exit costs, and other asset charges.

⁽³⁾ Loss (gain) on dispositions includes working capital adjustments related to dispositions.

⁽⁴⁾ Certain expenses are maintained at the corporate level and not allocated to the segments. These expenses include deal-related expenses, executive and functional compensation costs, non-service pension costs, non-operating insurance expenses, shared business services overhead costs and various administrative expenses relating to the corporate headquarters.

(benefits)

During the year ended December 31, 2021, restructuring and other activities included restructuring charges of \$26.7 million and other (benefits) costs of \$11.7 million. Restructuring expense was incurred in response to demand conditions, asset charges related to a product line exit, as well as broad-based operational efficiency initiatives focusing on footprint consolidation and IT centralization. Other (benefits) costs were comprised primarily of \$12.1 million other than temporary impairment charge related to an equity method investment and a \$6.1 million write-off of assets in connection with an exit from certain Latin America countries in our Climate & Sustainability Technologies segment, offset by a \$9.1 million payment received for previously incurred restructuring costs related to a product line exit (\$7.3 million is classified within costs of goods and services and \$1.8 million within selling, general and administrative expenses) within our Engineering Products segment and \$3.3 million of gains on sales of assets as a result of restructuring actions in our Pumps & Process Solutions segment. These restructuring and other charges were recorded in cost of goods and services and selling, general and administrative expenses in the consolidated statement of earnings.

We recorded the following restructuring and other costs (benefits) for the year ended December 31, 2021:

3,847

	 Year Ended December 31, 2021												
(dollars in thousands)	gineered roducts	Er	Clean nergy & Tueling		Imaging & Identification		Pumps & Process Solutions		limate & tainability chnologies	Co	rporate		Total
Restructuring	\$ 9,507	\$	3,609	\$	4,589	\$	1,911	\$	5,068	\$	2,021	\$	26,705
Other (benefits) costs, net	(8,702)		238		1,888		(2,347)		18,146		2,508		11,731
Restructuring and other costs													

6,477

(436) \$

23,214

4.529

38,436

During the year ended December 31, 2020, restructuring and other activities included restructuring charges of \$44.5 million and other costs of \$7.0 million. Restructuring expense was comprised primarily of new actions executed in response to lower demand driven by COVID-19 as well as continuing broad-based selling, general and administrative expense reduction initiatives and broad-based operational efficiency initiatives focusing on footprint consolidation, and operational optimization and IT centralization. Other costs were comprised primarily of charges related to the restructuring actions and asset charges, principally due to a \$3.6 million write off of assets, partially offset by a \$1.7 million gain on sale of assets in our Climate & Sustainability Technologies segment. These restructuring and other charges were recorded in cost of goods and services and selling, general and administrative expenses in the consolidated statement of earnings.

We recorded the following restructuring and other costs for the year ended December 31, 2020:

805

	 Year Ended December 31, 2020												
(dollars in thousands)	gineered roducts	En	Clean ergy & ueling		naging &	F	umps & Process olutions	Sus	limate & stainability chnologies	Co	orporate		Total
Restructuring	\$ 10,307	\$	6,681	\$	5,946	\$	13,374	\$	4,015	\$	4,145	\$	44,468
Other costs, net	1,223		22		81		62		2,460		3,156		7,004
Restructuring and other costs	\$ 11,530	\$	6,703	\$	6,027	\$	13,436	\$	6,475	\$	7,301	\$	51,472

See Note 11 — Restructuring Activities in the Consolidated Financial Statements in Item 8 of this Form 10-K for additional details regarding our recent restructuring activities.

Purchase Accounting Expenses

Purchase accounting expenses primarily relate to amortization of acquired assets and charges related to fair value step-ups for acquired inventory sold during the period. These expenses are not presented in our segment earnings because they are excluded from the segment operating performance measure reviewed by management. These expenses reconcile to segment earnings as follows:

	Years Ended December 31,										
(dollars in thousands)		2022		2021		2020					
Purchase accounting expenses											
Engineered Products	\$	20,617	\$	16,259	\$	15,446					
Clean Energy & Fueling 1		96,655		51,951		46,556					
Imaging & Identification		22,179		23,308		24,533					
Pumps & Process Solutions		22,332		29,166		30,021					
Climate & Sustainability Technologies		19,320		21,296		21,959					
Total	\$	181,103	\$	141,980	\$	138,515					

The increase of \$44,704 in purchase accounting expenses for the year ended December 31, 2022 from the prior year is due to the acquisition of RegO and Acme Cryogenics in Q4 2021 and includes \$18,995 in charges related to fair value step-ups for inventory.

FINANCIAL CONDITION

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Significant factors affecting liquidity are cash flows generated from operating activities, capital expenditures, acquisitions, dispositions, dividends, repurchase of outstanding shares, adequacy of available commercial paper and bank lines of credit and the ability to attract long-term capital with satisfactory terms. We generate substantial cash from the operations of our businesses and remain in a strong financial position, with sufficient liquidity available for reinvestment in existing businesses and strategic acquisitions.

Cash Flow Summary

The following table is derived from our consolidated statements of cash flows:

	Years	31,		
Cash Flows from Operations (in thousands)	2022	2021		2020
Net cash flows provided by (used in):				
Operating activities	\$ 805,724	\$ 1,115,865	\$	1,104,810
Investing activities	(540,924)	(992,753)		(481,379)
Financing activities	(260, 265)	(249,880)		(506,290)

Operating Activities

Cash provided by operating activities for the year ended December 31, 2022 decreased compared to 2021. This decrease was primarily driven by higher investments in working capital to support business growth and higher compensation payouts. Additionally, estimated tax payments increased from 2021 to 2022, including a \$43.5 million income tax payment in 2022 related to the gain on sale of Unified Brands in Q4 2021 and a \$13.4 million tax payment in 2022 related to an internal reorganization.

Cash provided by operating activities for the year ended December 31, 2021 increased compared to 2020. This increase was primarily driven higher earnings net of non-cash adjustments and increases to accrued expenses, partially offset by our investment in working capital of \$307.1 million.

Pension and Other Post-Retirement Activity: Total cash used in conjunction with pension plans during 2022 was \$12.9 million, including contributions to our international pension plans and payments of benefits under our non-qualified supplemental pension plans.

The funded status of our U.S. qualified defined benefit pension plan is dependent upon many factors, including returns on invested assets, the level of market interest rates and the level of funding. We contribute cash to our plans at our discretion, subject to applicable regulations and minimum contribution requirements. Due to the overfunded status of this plan, the Company did not make contributions in 2022, 2021 or 2020 and does not expect to make contributions in the near term.

Our international pension plans are located in regions where often it is not economically advantageous to pre-fund the plans due to local regulations. Total cash payments, which include contributions and direct benefit payments to nonfunded plans, to ongoing international defined benefit pension plans in 2022, 2021 and 2020 totaled \$9.1 million, \$8.1 million and \$7.3 million, respectively. In 2023, we expect to make cash payments of approximately \$7.1 million related to our non-U.S. plans.

Our non-qualified supplemental pension plans are funded through Company assets as benefits are paid. In 2022, 2021 and 2020 a total of \$3.8 million, \$6.3 million, and \$12.3 million in benefits were paid under these plans, respectively. See Note 17 — Employee Benefit Plans in the Consolidated Financial Statements in Item 8 of this Form 10-K for further discussion regarding our post-retirement plans. In 2023, we expect to make cash payments of approximately \$7.4 million to our non-qualified U.S. plans.

Adjusted Working Capital: We believe adjusted working capital (a non-GAAP measure calculated as accounts receivable, plus inventory, less accounts payable) provides a meaningful measure of liquidity by showing changes caused by operational results. The following table provides a calculation of adjusted working capital:

Adjusted Working Capital (dollars in thousands)	December 31, 2022			ember 31, 2021
Accounts receivable	\$	1,516,871	\$	1,347,514
Inventories		1,366,608		1,191,095
Less: Accounts payable		1,068,144		1,073,568
Adjusted working capital	\$	1,815,335	\$	1,465,041

Adjusted working capital increased from December 31, 2021 by \$350.3 million, or 23.9%, to \$1.8 billion at December 31, 2022, which reflected an increase in accounts receivable of \$169.4 million, an increase in inventory of \$175.5 million and a decrease in accounts payable of \$5.4 million. These amounts include the effects of acquisitions and foreign currency translation. Overall, working capital was higher in 2022 primarily due to increases in accounts receivable on timing of order shipments and higher balances of raw materials and components inventory. We carried elevated levels of working capital in 2022 due to high customer demand and to ensure supply of inputs due to supply chain dislocations. With supply chains improving in the second half of 2022, we began reducing inventory balances, and continue to focus on improving working capital management.

We facilitate the opportunity for suppliers to participate in voluntary supply chain financing ("SCF") programs with participating financial institutions. Participating suppliers have the ability to sell receivables due from us to SCF financial institutions at the discretion of both the suppliers and the SCF financial institutions, at no economic impact to the Company. The Company and our suppliers agree on commercial terms, including payment terms, for the goods and services we procure regardless of whether the supplier participates in SCF. For participating suppliers, our responsibility is limited to making all payments to the SCF financial institutions on the terms originally negotiated with the supplier, irrespective of whether the supplier elects to sell receivables to the SCF financial institution. The SCF financial institution pays the supplier on the invoice due date for any invoices that were not previously sold by the supplier to the SCF financial institution. Thus, suppliers using SCF have additional potential flexibility in managing their liquidity by accelerating, at their option and cost, collection of receivables due from Dover.

Outstanding payments related to SCF programs are recorded within accounts payable in our consolidated balance sheets. As of December 31, 2022 and 2021, amounts due to financial institutions for suppliers using SCF were approximately \$156.3 million and \$211.0 million, respectively. SCF related payments are classified as a reduction to cash flows from operations. Amounts paid to SCF financial institutions were approximately \$882.5 million during the year ended December 31, 2022, \$825.0 million during the year ended December 31, 2020.

Investing Activities

Cash flow from investing activities is derived from cash outflows for capital expenditures and acquisitions, partially offset by cash inflows from proceeds from the sale of businesses, and property, plant and equipment. The majority of the activity in investing activities was comprised of the following:

- Acquisitions: In 2022, we deployed \$312.9 million, to acquire three businesses. In comparison, we acquired nine businesses in 2021 for an aggregate purchase price of approximately \$1,112.1 million, excluding contingent consideration of up to \$13.0 million. Total acquisition spend in 2020 was \$335.8 million and was comprised of six businesses. See Note 3 Acquisitions in the Consolidated Financial Statements in Item 8 of this Form 10-K for additional information with respect to recent acquisitions.
- Proceeds from sale of businesses: In 2022, we had one immaterial disposition. Cash proceeds of \$275.0 million in 2021 was due to the sale of UB within the Climate & Sustainability Technologies segment and the sale of our RWB equity method investment within the Engineered Products segment. In 2020, we generated cash proceeds of \$15.4 million due to the sale of AMS Chino.
- Capital spending: Capital expenditures, primarily to support growth initiatives, productivity and new product launches, were \$221.0 million in 2022, \$171.5 million in 2021 and \$165.7 million in 2020. Our capital expenditures

increased \$49.5 million and \$5.8 million in 2022 and 2021, respectively, in line with our plan to support growth capacity, digitization, innovation, and productivity.

We anticipate that capital expenditures and any additional acquisitions we make in 2023 will be funded from available cash and internally generated funds and, if necessary, through the issuance of commercial paper, or by accessing the public debt or equity markets. We estimate capital expenditures in 2023 to range from \$185.0 million to \$195.0 million.

Financing Activities

Our cash flow from financing activities generally relates to the use of cash for purchases of our common stock and payment of dividends, offset by net borrowing activity. The majority of financing activity was attributed to the following:

- Repurchase of common stock, including accelerated share repurchase program: During 2022, the Company received a total of 3,892,295 shares upon completion of the accelerated share repurchase agreement (the "ASR Agreement") for \$500 million. The total number of shares ultimately repurchased under the ASR Agreement was based on the volume-weighted average share price of Dover's common stock during the calculation period of the ASR Agreement, less a discount, which was \$128.46 over the term of the ASR Agreement. During the year ended December 31, 2022, we repurchased, exclusive of the ASR Agreement, 641,428 shares of common stock at a total cost of \$85 million. During the year ended December 31, 2021, we repurchased 182,951 shares of common stock at a total cost of \$21.6 million. During the year ended December 31, 2020, we repurchased 979,165 shares of common stock at a total cost of \$106.3 million.
- Commercial paper and other short-term borrowings, net: During 2022, we received net proceeds of \$629.9 million from commercial paper and other short-term borrowings, primarily used to fund our accelerated share repurchase transaction and to fund a portion of our acquisitions. During 2021, we received net proceeds of \$105.0 million from commercial paper borrowings to fund a portion of our acquisitions. During 2020, we used \$84.7 million to pay off commercial paper borrowings.
- Dividend payments: Total dividend payments to common shareholders were \$287.6 million in 2022, \$286.9 million in 2021 and \$284.3 million in 2020. Our dividends paid per common share increased 1% to \$2.01 per share in 2022 compared to \$1.99 per share in 2021, which represents the 67th consecutive year that our dividend per share has increased. The number of common shares outstanding decreased from 2021 to 2022 as share repurchases exceeded share issuances.
- Payments to settle employee tax obligations: Payments to settle tax obligations on share exercises were \$14.6 million, \$41.9 million and \$28.5 million in 2022, 2021 and 2020, respectively. The decrease from 2021 to 2022 is primarily due to the decrease in the number of shares exercised and a decrease in the average stock price compared to the prior year.

Liquidity and Capital Resources

Free Cash Flow

In addition to measuring our cash flow generation and usage based upon the operating, investing and financing classifications included in the consolidated statements of cash flows, we also measure free cash flow (a non-GAAP measure) which represents net cash provided by operating activities minus capital expenditures. We believe that free cash flow is an important measure of liquidity because it provides management and investors a measurement of cash generated from operations that may be available for mandatory payment obligations and investment opportunities, such as funding acquisitions, paying dividends, repaying debt and repurchasing our common stock.

The following table reconciles our free cash flow to cash flow provided by operating activities:

	 Years	s En	ded Decemb	er 3	1,
Free Cash Flow (dollars in thousands)	2022		2021		2020
Cash flow provided by operating activities	\$ 805,724	\$	1,115,865	\$	1,104,810
Less: Capital expenditures	 (220,962)		(171,465)		(165,692)
Free cash flow	\$ 584,762	\$	944,400	\$	939,118
Cash flow from operating activities as a percentage of revenue	9.5 %		14.1 %		16.5 %
Cash flow from operating activities as a percentage of net earnings	75.6 %		99.3 %		161.7 %
Free cash flow as a percentage of revenue	6.9 %		11.9 %		14.1 %
Free cash flow as a percentage of net earnings	54.9 %		84.0 %		137.4 %

For 2022, we generated free cash flow of \$584.8 million, representing 6.9% of revenue and 54.9% of net earnings. Free cash flow in 2021 was \$944.4 million, or 11.9% of revenue and 84.0% of earnings. Free cash flow in 2020 was \$939.1 million, or 14.1% of revenue and 137.4% of earnings. Free cash flow decreased from 2021 to 2022 due to lower operating cash flow and increased capital expenditures compared to the prior year. The decrease in operating cash flow was primarily a result of investments in working capital to support business growth and higher compensation payouts compared to the prior year. Additionally, the year ended December 31, 2022 includes a \$43.5 million income tax payment related to the gain on sale of Unified Brands in the fourth quarter of 2021 and a \$13.4 million tax payment in 2022 related to an internal reorganization. The 2021 increase in free cash flow compared to 2020 reflects higher cash flow provided by operations, partially offset by higher investments in capital expenditures compared to the prior year.

Capitalization

We use commercial paper borrowings for general corporate purposes, including the funding of acquisitions and the repurchase of our common stock. As of December 31, 2022, we maintained a \$1 billion five-year unsecured revolving credit facility (the "Credit Agreement") with a syndicate of banks, which expires on October 4, 2024. This facility is used primarily as liquidity back-up for Dover's commercial paper program and for general corporate purposes.

The Company may elect to have loans under the Credit Agreement which bear interest at a base rate plus a specified applicable margin. Under this facility, we are required to pay a facility fee and to maintain an interest coverage ratio of consolidated EBITDA to consolidated net interest expense of not less than 3.0 to 1. We were in compliance with this covenant and our other long-term debt covenants at December 31, 2022 and had a coverage ratio of 15.3 to 1. We are not aware of any potential impairment to our liquidity and expect to remain in compliance with all of our debt covenants. Additionally, our earliest material long-term debt maturity is in 2025.

We also have a current shelf registration statement filed with the SEC that allows for the issuance of additional debt securities that may be utilized in one or more offerings on terms to be determined at the time of the offering. Net proceeds of any offering would be used for general corporate purposes, including repayment of existing indebtedness, capital expenditures and acquisitions.

At December 31, 2022, our cash and cash equivalents totaled \$380.9 million, of which approximately \$261.4 million was held outside the United States. At December 31, 2021, our cash and cash equivalents totaled \$385.5 million, of which \$257.5 million was held outside the United States. Cash and cash equivalents are held primarily in bank deposits with highly rated banks. We regularly hold cash in excess of near-term requirements in bank deposits or invest the funds in government money market instruments or short-term investments, which consist of investment grade time deposits with original maturity dates at the time of purchase of no greater than three months.

We utilize the net debt to net capitalization calculation (a non-GAAP measure) to assess our overall financial leverage and capacity and believe the calculation is useful to investors for the same reason. Net debt represents total debt minus cash and cash equivalents. Net capitalization represents net debt plus stockholders' equity. The following table provides a reconciliation of net debt to net capitalization to the most directly comparable GAAP measures:

Net Debt to Net Capitalization Ratio (dollars in thousands)	Dec	ember 31, 2022	Dec	ember 31, 2021	Dec	ember 31, 2020
Other	\$	836	\$	702	\$	_
Commercial paper		734,936		105,000		_
Total short-term borrowings		735,772		105,702		_
Long-term debt		2,942,513		3,018,714		3,108,829
Total debt		3,678,285		3,124,416		3,108,829
Less: Cash and cash equivalents		(380,868)	_	(385,504)		(513,075)
Net debt		3,297,417		2,738,912		2,595,754
Add: Stockholders' equity		4,286,366		4,189,528		3,385,773
Net capitalization	\$	7,583,783	\$	6,928,440	\$	5,981,527
Net debt to net capitalization		43.5 %		39.5 %		43.4 %

Our net debt to net capitalization ratio increased to 43.5% at December 31, 2022 compared to 39.5% at December 31, 2021. Net debt increased \$558.5 million primarily due to an increase in commercial paper borrowings used to fund our accelerated share repurchase transaction and a portion of our acquisitions during the year. Stockholders' equity increased for the period as a result of current earnings of \$1,065.4 million, offset by \$287.6 million of dividends paid, \$585.0 million in share repurchases and a loss in accumulated other comprehensive income of \$112.2 million, primarily due to the unfavorable impact of foreign currency fluctuations.

Our net debt to net capitalization ratio decreased to 39.5% at December 31, 2021 compared to 43.4% at December 31, 2020. The decrease in this ratio was driven primarily by the increase in stockholders' equity of \$803.8 million for the period as a result of increase in current earnings of \$1,123.8 million, offset by \$286.9 million of dividends paid and \$21.6 million in share repurchases. Net debt increased \$143.2 million during the period primarily due to a decrease of \$127.6 million in cash and cash equivalents and an increase in total debt as a result of an increase in commercial paper.

Our ability to obtain debt financing at comparable risk-based interest rates is partly a function of our existing cash flow-to-debt and debt-to-capitalization levels as well as our current credit standing. Set forth below are our credit ratings, as of December 31, 2022, which were independently developed by the respective credit agencies. The Moody's rating and outlook were issued in December 2018, and the Standard & Poor's rating was issued in December 2017 and the outlook was most recently revised in May 2021. The ratings and outlooks from both agencies were affirmed in 2022.

	Short-Term Rating	Long-Term Rating	Outlook
Moody's	P-2	Baa1	Stable
Standard & Poor's	A-2	BBB+	Stable

As of December 31, 2022, we had approximately \$180.3 million outstanding in letters of credit, surety bonds, and performance and other guarantees with financial institutions, which primarily expire on various dates through 2029. These letters of credit and bonds are primarily issued as security for insurance, warranty and other performance obligations. In general, we would only be liable for the amount of these guarantees in the event of default in the performance of our obligations, the probability of which we believe is remote.

Our estimate of future interest payments on long-term debt is \$1,038.0 million based on the interest rates in effect as of December 31, 2022.

Operating cash flow and access to capital markets are expected to satisfy our various cash flow requirements, including acquisitions, capital expenditures, purchase obligations, and lease obligations. See Note 7 — Leases in the Consolidated

Financial Statements in Item 8 of this Form 10-K for additional details on lease obligations. Acquisition spending and/or share repurchases could potentially increase our debt.

We believe that existing sources of liquidity are adequate to meet anticipated funding needs at current risk-based interest rates for the foreseeable future.

Financial Instruments and Risk Management

The diverse nature of our businesses' activities necessitates the management of various financial and market risks, including those related to changes in interest rates, foreign currency exchange rates and commodity prices. We periodically use derivative financial instruments to manage some of these risks. We do not hold or issue derivative instruments for trading or speculative purposes. We are exposed to credit loss in the event of nonperformance by counterparties to our financial instrument contracts; however, nonperformance by these counterparties is considered unlikely as our policy is to contract with highly-rated, diversified counterparties.

Interest Rate Exposure

As of December 31, 2022, and for the years ended December 31, 2022, 2021, and 2020, we did not have any open interest rate swap contracts; however, we may in the future enter into interest rate swap agreements to manage our exposure to interest rate changes. We issue commercial paper, which exposes us to changes in variable interest rates; however, maturities are typically three months or less so a change in rates over this period would not have a material impact on our pre-tax earnings.

We consider our current risk related to market fluctuations in interest rates to be minimal since our debt is largely long-term and fixed in nature. Generally, the fair market value of fixed-interest rate debt will increase as interest rates fall and decrease as interest rates rise. A 100 basis point increase in market interest rates would decrease the 2022 year-end fair value of our long-term debt by approximately \$165.0 million. However, since we have no plans to repurchase our outstanding fixed-rate instruments before their maturities, the impact of market interest rate fluctuations on our long-term debt does not affect our results of operations or financial position.

Foreign Currency Exposure

We conduct business in various non-U.S. countries, including Canada, substantially all of the European countries, Mexico, Brazil, China, India and other Asian countries. Therefore, we have foreign currency risk relating to receipts from customers, payments to suppliers and intercompany transactions denominated in foreign currencies. We will occasionally use derivative financial instruments to offset such risks, when it is believed that the exposure will not be limited by our normal operating and financing activities. We have formal policies to mitigate risk in this area by using fair value and/or cash flow hedging programs.

Changes in the value of the currencies of the countries in which we operate affect our results of operations, financial position and cash flows when translated into U.S. dollars, our reporting currency. The strengthening of the U.S. dollar could result in unfavorable translation effects as the results of foreign operations are translated into U.S. dollars. We have generally accepted the exposure to exchange rate movements relative to our investment in non-U.S. operations. We may, from time to time, for a specific exposure, enter into fair value hedges.

Additionally, we have designated the €600 million and €500 million of euro-denominated notes issued November 9, 2016 and November 4, 2019, respectively, as a hedge of our net investment in euro-denominated operations. Due to the high degree of effectiveness between the hedging instruments and the exposure being hedged, fluctuations in the value of the euro-denominated debt due to exchange rate changes are offset by changes in the net investment. Accordingly, changes in the value of the euro-denominated debt are recognized in the cumulative translation adjustment section of other comprehensive income to offset changes in the value of the net investment in euro-denominated operations. Due to the fluctuations of the euro relative to the U.S. dollar, the U.S. dollar equivalent of this debt increases or decreases, resulting in the recognition of a pre-tax gain of \$80.3 million, \$94.0 million and loss of \$119.3 million in other comprehensive income for the years ended December 31, 2022, 2021, and 2020 respectively.

Commodity Price Exposure

Some of our businesses are exposed to volatility in the prices of certain commodities, such as aluminum, steel, copper and various precious metals, among others. Our primary exposure to commodity pricing volatility relates to the use of these materials in purchased component parts or the purchase of raw materials. Markets for multiple raw materials saw significant cost increases throughout 2021 and into 2022, which we partially offset through price increases and other levers. In some cases, we maintain longer-term index based contracts on raw materials and component parts and centrally drive an ongoing effort to minimize risk proactively. However, we are prone to exposure as these contracts expire.

Critical Accounting Estimates

Revenue Recognition

Description

The majority of our revenue is generated through the manufacture and sale of a broad range of specialized products and components, with revenue recognized upon transfer of title and risk of loss, which is generally upon shipment. In limited cases, our revenue arrangements with customers require delivery, installation, testing, certification, or other promises to deliver goods or services that may impact the timing or pattern of revenue recognized. The remainder of our revenue is recognized over time, which is primarily related to services performed and specialized goods manufactured.

Judgments and uncertainties involved in the estimate

A significant level of judgment is involved in the identification of performance obligations for contracts with multipleelement arrangements and the allocation of the transaction price based on the relative stand-alone selling price. The identification requires judgment to identify all distinct goods or services and also the appropriate timing of revenue recognition for each distinct good or service based on the transfer of control to the customer. We estimate the relative standalone selling price for performance obligations if not directly observable. A significant level of judgment is also involved in the selection of the appropriate method to recognize revenue over time.

Effect if actual results differ from assumptions

To the extent the judgments and estimates used or the method selected to recognize revenue over time differ or change in a future period, a change to revenue and the related assets and liabilities could impact our financial position or results of operations. The judgments, estimates, and methods used have been applied consistently over the last three fiscal years.

Valuation of Acquired Intangible Assets

Description

Intangible assets represent a significant portion of our consolidated balance sheet as a result of current and past acquisitions. Intangible assets primarily include customer intangibles, trademarks, unpatented technologies, and patents. The fair value of acquired intangible assets is determined using widely accepted valuation techniques, and the Company may engage third-party appraisal firms to assist with the determination of fair values of significant intangible assets. The valuation of intangible assets is performed at the time of acquisition and may change during the acquisition measurement period until the valuation is finalized. The fair value of finite-lived intangible assets is subsequently amortized over the estimated useful life.

Judgments and uncertainties involved in the estimate

The significant assumptions used in the valuation of customer intangibles include future cash flows, customer attrition rate, and discount rate. The significant assumptions for the valuation of trademarks include future revenues, royalty rate, and discount rate. The significant assumptions for the valuation of unpatented technologies and patents include future revenues, obsolescence rate, royalty rate, and discount rate. The assumptions and estimates used in the valuation of these intangible assets are based on several factors, including historical experience with similar businesses and industries and information obtained from operating company management.

Effect if actual results differ from assumptions

While we believe the assumptions used in our valuation of intangible assets are reasonable and representative of expected results, actual results may differ from these assumptions. While the assumptions used for each acquisition are dependent on the acquired company, the assumptions have been applied using a consistent methodology over the last three fiscal years.

Goodwill Impairment

Description

Goodwill is the difference between the consideration transferred and the fair value of net assets acquired. Goodwill is tested for impairment on an annual basis during the fourth quarter, or more frequently when indicators of impairment exist, or when a change in the composition of reporting units for goodwill occurs for other reasons, such as a disposition or a change in segments. The impairment test involves a comparison of the fair value of each reporting unit with its carrying value. Fair value reflects the price a potential market participant would be willing to pay for the reporting unit in an arms-length transaction.

Judgments and uncertainties involved in the estimate

The significant assumptions in the fair value analysis of goodwill are the estimated future cash flows and the discount rate. The determination of future cash flows involves significant judgment and is primarily driven by forecasted revenue growth rates and EBITDA margins for the reporting unit. These assumptions are developed based on the reporting unit's expected future performance, which considers historical performance. We use a discount rate commensurate with the inherent risks in our internally developed forecasts of future cash flows. The discount rate may also fluctuate due to market conditions such as rising interest rates.

Effect if actual results differ from assumptions

While we believe the assumptions used in our annual impairment analysis are reasonable and representative of expected results and reflective of a market participant, actual results may differ from these assumptions. The methodology used for the goodwill impairment test has remained consistent over the last three fiscal years.

Valuation of Pension Benefit Obligation

Description

The pension benefit obligation is actuarially determined in accordance with GAAP and is impacted by assumptions used to estimate the obligation, namely the discount rate. Annually, we review the actuarial assumptions used and compare the assumptions to third-party benchmarks to ensure that the selected assumptions accurately account for our future pension benefit obligations.

Judgments and uncertainties involved in the estimate

Our discount rate assumptions are determined by developing a yield curve based on high quality corporate bonds with maturities matching the plans' expected benefit payment streams. The plans' expected cash flows are then discounted by the resulting year-by-year spot rates. The 2022 weighted-average discount rate used to measure our pension benefit obligations ranged from 3.57% to 5.55%, a general increase from the 2021 rates, which ranged from 1.18% to 2.95%, due to increased market interest rates over this period.

Effect if actual results differ from assumptions

A 25-basis point decrease in the discount rates used for these plans would have increased pension benefit obligations by approximately \$15.6 million from the amount recorded at December 31, 2022. The methodology used for the valuation of the pension benefit obligation has remained consistent over the last three fiscal years.

Recoverability of Deferred Income Tax Assets and Unrecognized Tax Benefits

Description

We operate in and are subject to income taxes in various jurisdictions and are subject to ongoing audits by federal, state, and non-U.S. tax authorities. Significant judgment is required in determining the realizability of deferred tax assets and evaluating unrecognized tax benefits.

We have significant amounts of deferred tax assets that are evaluated for recoverability and valued accordingly. Management evaluates the realizability of deferred income tax assets for each jurisdiction in which the Company operates. We record valuation allowances to reduce the carrying value of deferred tax assets to amounts that we expect are more likely than not to be realized.

The provision for unrecognized tax benefits provides a recognition threshold and measurement attribute for determining the financial statement tax benefits taken or expected to be taken in a tax return and disclosure requirements regarding uncertainties in income tax positions. The tax position is measured at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

Judgments and uncertainties involved in the estimate

In assessing the adequacy of a recorded valuation allowance, we consider all positive and negative evidence, including the scheduled reversal of deferred tax liabilities, historical and projected future taxable income, and tax planning strategies. Additionally, significant judgment is required in the identification and measurement of unrecognized tax benefits. Our liability for unrecognized tax benefits contains uncertainties because management is required to make assumptions and to apply judgment to estimate the exposures associated with our various filing positions.

Effect if actual results differ from assumptions

Although we believe that our judgments and estimates are reasonable, actual results could differ and result in additional tax expense or benefit. If we determine a valuation allowance should be recognized to reduce the carrying value of a deferred tax asset or a liability for an unrecognized tax benefit needs to be recorded, the adjustment would result in a change to tax expense in the period such determination is made. We have not made any material changes in the process we use to assess valuation allowances and unrecognized tax benefits over the last three fiscal years.

Contingencies

Description

Liabilities are established for environmental and legal contingencies at both the business and corporate levels. A significant amount of judgment and the use of estimates are required to quantify our ultimate exposure in these matters.

Judgments and uncertainties involved in the estimate

The valuation of liabilities for these contingencies is reviewed on a quarterly basis to ensure that we have accrued the proper level of expense. The liability balances are adjusted to account for changes in circumstances for ongoing issues and the establishment of additional liabilities for emerging issues. Estimates used in the valuations include the probable outcome of such proceedings, the costs and expenses reasonably expected to be incurred and currently accrued to-date and consider the availability and extent of insurance coverage. Such liability balances contain uncertainties due to new developments regarding the facts and circumstances of each proceeding, changes in applicable laws and regulations, and other future events and decisions by third parties that may impact the ultimate resolution of a proceeding.

Effect if actual results differ from assumptions

Although we believe that the amount accrued to-date is adequate, future changes in circumstances could impact these determinations, and we may be exposed to a material loss. For example, to the extent we prevail in matters for which a liability has been established or are required to pay amounts in excess of our established liability, our contingent liability in a given financial statement period could be materially affected. However, the Company does not believe that it is currently involved in any legal proceedings which, individually or in the aggregate, could have a material effect on its financial position, results of operations, or cash flows.

Recent Accounting Standards

See Note 1 — Description of Business and Summary of Significant Accounting Policies in the Consolidated Financial Statements in Item 8 of this Form 10-K for a discussion of recent accounting pronouncements and recently adopted accounting standards.

Non-GAAP Disclosures

In an effort to provide investors with additional information regarding our results as determined by GAAP, we also disclose non-GAAP information, which we believe provides useful information to investors. Free cash flow, free cash flow as a percentage of revenue, free cash flow as a percentage of net earnings, net debt, net capitalization, net debt to net capitalization ratio, adjusted working capital, and organic revenue growth are not financial measures under GAAP and should not be considered as a substitute for cash flows from operating activities, debt or equity, working capital or revenue as determined in accordance with GAAP, and they may not be comparable to similarly titled measures reported by other companies.

We believe the net debt to net capitalization ratio and free cash flow are important measures of liquidity. Net debt to net capitalization is helpful in evaluating our capital structure and the amount of leverage we employ. Free cash flow and free cash flow ratios provide both management and investors a measurement of cash generated from operations that is available to fund acquisitions, pay dividends, repay debt and repurchase our common stock. Free cash flow as a percentage of revenue equals free cash flow divided by revenue. Free cash flow as a percentage of net earnings equals free cash flow divided by net earnings. We believe that reporting adjusted working capital provides a meaningful measure of liquidity by showing changes caused by operational results. We believe that reporting organic revenue growth, which excludes the impact of foreign currency exchange rates and the impact of acquisitions and divestitures, provides a useful comparison of our revenue performance and trends between periods.

Reconciliations and comparisons of GAAP to non-GAAP measures can be found above in this Item 7, MD&A.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by this section is incorporated by reference to the section, "Financial Instruments and Risk Management", included within the MD&A in Item 7.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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(All other schedules are not required and have been omitted)

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f).

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control*—*Integrated Framework* (2013).

Based on its assessment under the criteria set forth in *Internal Control* — *Integrated Framework* (2013), management concluded that, as of December 31, 2022, the Company's internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Dover Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Dover Corporation and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of earnings, of comprehensive earnings, of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the

company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

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

Goodwill Impairment Test

As described in Notes 1 and 9 to the consolidated financial statements, the Company's consolidated goodwill balance was \$4.669 billion as of December 31, 2022. Management performs its goodwill impairment test annually in the fourth quarter, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired, when some portion but not all of a reporting unit is disposed of or classified as held for sale, or when a change in the composition of reporting units occurs for other reasons. When performing the impairment test, management estimates the fair value of each reporting unit using the income-based valuation method, which involves significant judgment. Under the income-based valuation method, fair value is determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate. Management uses internal forecasts to estimate future cash flows, which are based on historical performance and future estimated results.

The principal considerations for our determination that performing procedures relating to the goodwill impairment test is a critical audit matter are there was significant judgment by management when developing the fair value measurement of each reporting unit, which in turn led to a high degree of auditor judgment and subjectivity in performing procedures and in evaluating management's estimate of fair value of the reporting units, specifically related to revenue growth in the estimated future cash flows. In addition, the nature and extent of audit effort required to address the matter was a consideration.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment test, including controls over the determination of revenue growth in the estimated future cash flows. These procedures also included, among others, testing the appropriateness of the discounted cash flow model, assessing results of sensitivities over the assumptions in the discounted cash flow model, and testing the reasonableness of significant assumptions used by management, specifically revenue growth. When testing revenue growth, we evaluated whether the assumptions were reasonable by (i) understanding management's process to develop the estimated future cash flows, (ii) comparing management's forecasted revenue growth to current and prior period performance and (iii) comparing management's forecasted revenue growth to external market and/or industry data.

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
February 10, 2023

We have served as the Company's auditor since 1995.

DOVER CORPORATION CONSOLIDATED STATEMENTS OF EARNINGS

(In thousands, except per share amounts)

	Years Ended December 31,						
		2022		2021		2020	
Revenue	\$	8,508,088	\$	7,907,081	\$	6,683,760	
Cost of goods and services		5,444,532		4,937,295		4,209,741	
Gross profit		3,063,556		2,969,786		2,474,019	
Selling, general and administrative expenses		1,684,226		1,688,278		1,541,032	
Operating earnings		1,379,330		1,281,508		932,987	
Interest expense		116,456		106,319		111,937	
Interest income		(4,430)		(4,441)		(3,571)	
Gain on dispositions				(206,338)		(5,213)	
Other income, net		(20,201)		(14,858)		(11,900)	
Earnings before provision for income taxes		1,287,505		1,400,826		841,734	
Provision for income taxes		222,129		277,008		158,283	
Net earnings	\$	1,065,376	\$	1,123,818	\$	683,451	
Net earnings per share:							
Basic	\$	7.47	\$	7.81	\$	4.74	
Diluted	\$	7.42	\$	7.74	\$	4.70	
Weighted average shares outstanding:							
Basic		142,681		143,923		144,050	
Diluted		143,595		145,273		145,393	

DOVER CORPORATION CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS (In thousands)

	Years Ended December 31,				
	2022	2021	2020		
Net earnings	\$ 1,065,376	\$ 1,123,818	\$ 683,451		
Other comprehensive earnings (loss), net of tax					
Foreign currency translation adjustments:					
Foreign currency translation (losses) gains	(119,010)	(39,819)	55,450		
Reclassification of foreign currency translation losses to earnings	5,915				
Total foreign currency translation adjustments (net of \$(17,824), \$(20,976) and \$26,957 tax (provision) benefit, respectively)	(113,095)	(39,819)	55,450		
Pension and other postretirement benefit plans:					
Actuarial (losses) gains	(2,658)	26,960	705		
Prior service credit (cost)	1,370	(1,433)	828		
Amortization of actuarial losses included in net periodic pension cost	1,903	9,451	6,695		
Amortization of prior service costs included in net periodic pension cost	888	1,023	1,153		
Settlement and curtailment impact	3,688	1,167	18		
Total pension and other postretirement benefit plans (net of \$(2,230), \$(9,868) and \$(3,197) tax provision, respectively)	5,191	37,168	9,399		
Changes in fair value of cash flow hedges:					
Unrealized net (losses) gains	(535)	6,724	(1,445)		
Net gains reclassified into earnings	(3,732)	(4,871)	(632)		
Total cash flow hedges (net of \$1,217, \$(532) and \$607 tax benefit (provision), respectively)	(4,267)	1,853	(2,077)		
Other comprehensive (loss) earnings, net of tax	(112,171)	(798)	62,772		
Comprehensive earnings	\$ 953,205	\$ 1,123,020	\$ 746,223		

DOVER CORPORATION CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share amounts)

` · · · · · · · · · · · · · · · · · · ·	Dece	ember 31, 2022	Dece	mber 31, 2021
ASSETS				
Current assets:				
Cash and cash equivalents	\$	380,868	\$	385,504
Receivables, net		1,516,871		1,347,514
Inventories, net		1,366,608		1,191,095
Prepaid and other current assets		159,118		137,596
Total current assets		3,423,465		3,061,709
Property, plant and equipment, net		1,004,825		957,310
Goodwill		4,669,494		4,558,822
Intangible assets, net		1,333,735		1,359,522
Other assets and deferred charges		465,000		466,264
Total assets	\$	10,896,519	\$	10,403,627
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Short-term borrowings	\$	735,772	\$	105,702
Accounts payable		1,068,144		1,073,568
Accrued compensation and employee benefits		269,785		302,978
Deferred revenue		256,933		227,549
Accrued insurance		92,876		101,448
Other accrued expenses		318,337		347,097
Federal and other income taxes		31,427		91,999
Total current liabilities		2,773,274		2,250,341
Long-term debt		2,942,513		3,018,714
Deferred income taxes		375,150		364,117
Noncurrent income tax payable		44,313		48,385
Other liabilities		474,903		532,542
Stockholders' equity:				
Preferred stock - \$100 par value; 100,000 shares authorized; none issued		_		_
Common stock - \$1 par value; 500,000,000 shares authorized; 259,643,756 and 259,457,233 shares issued at December 31, 2022 and		250.644		250 455
2021		259,644		259,457
Additional paid-in capital		867,560		857,636
Retained earnings		10,223,070		9,445,245
Accumulated other comprehensive loss		(266,223)		(154,052)
Treasury stock, at cost: 119,945,271 and 115,411,548 shares at December 31, 2022 and 2021		(6,797,685)		(6,218,758)
Total stockholders' equity		4,286,366		4,189,528
Total liabilities and stockholders' equity	\$	10,896,519	\$	10,403,627

DOVER CORPORATION CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands, except per share amounts)

	_	Common ck \$1 Par Value	A	Additional Paid-In Capital	Retained Earnings	(Accumulated Other Comprehensive Earnings (Loss)	Treasury Stock		Sto	Total ockholders' Equity
Balance at December 31, 2019	\$	258,552	\$	869,719	\$ 8,211,257	\$	(216,026)	\$ (6,090	,842)	\$	3,032,660
Adoption of ASU No. 2016-13-CECL		_		_	(2,112)		_		_		(2,112)
Net earnings		_		_	683,451		_		_		683,451
Dividends paid (\$1.97 per share)		_		_	(284,312)		_		_		(284,312)
Common stock issued for the exercise of share-based awards		430		(28,906)	_		_		_		(28,476)
Stock-based compensation expense	•	_		25,026	_		_		_		25,026
Common stock acquired		_		_	_		_	(106	(,279)		(106,279)
Other comprehensive earnings, net of tax		_		_	_		62,772		_		62,772
Other		_		3,043	_		_		_		3,043
Balance at December 31, 2020		258,982		868,882	8,608,284		(153,254)	(6,197	,121)		3,385,773
Net earnings		_			1,123,818						1,123,818
Dividends paid (\$1.99 per share)		_		_	(286,896)		_		_		(286,896)
Common stock issued for the exercise of share-based awards		475		(42,399)	_		_		_		(41,924)
Stock-based compensation expense	•	_		31,111	_		_				31,111
Common stock acquired		_		_	_		_	(21	,637)		(21,637)
Other comprehensive loss, net of tax		_		_	_		(798)				(798)
Other		_		42	39		_				81
Balance at December 31, 2021		259,457		857,636	9,445,245		(154,052)	(6,218	,758)		4,189,528
Net earnings		_		_	1,065,376		_		_		1,065,376
Dividends paid (\$2.01 per share)		_		_	(287,551)		_		_		(287,551)
Common stock issued for the exercise of share-based awards		187		(14,824)	_		_		_		(14,637)
Stock-based compensation expense	•	_		30,821	_		_		_		30,821
Common stock acquired, including accelerated share repurchase program		_		(6,073)	_		_	(578	3,927)		(585,000)
Other comprehensive loss, net of tax		_		_			(112,171)				(112,171)
Balance at December 31, 2022	\$	259,644	\$	867,560	\$ 10,223,070	\$	(266,223)	\$ (6,797	,685)	\$	4,286,366

DOVER CORPORATION CONSOLIDATED STATEMENTS OF CASH FLOWS (In thousands)

		Year	s Er	nded Decemb	<u>er 3</u>	1,
		2022		2021		2020
Operating Activities:						
Net earnings	\$	1,065,376	\$	1,123,818	\$	683,451
Adjustments to reconcile net earnings to cash provided by operating activities:						
Depreciation and amortization		307,538		290,123		279,051
Stock-based compensation		30,821		31,111		25,026
Gain on dispositions		_		(206,338)		(5,213)
Provision for losses on accounts receivable (net of recoveries)		5,552		5,053		11,171
Deferred income taxes		(28,138)		(48,322)		(25,643)
Employee benefit plan expense		3,096		11,897		7,205
Other, net		(18,218)		(7,368)		(6,593)
Cash effect of changes in assets and liabilities (excluding effects of acquisitions, dispositions and foreign exchange):						
Accounts receivable		(209,021)		(201,540)		122,407
Inventories		(199,033)		(297,623)		10,519
Prepaid expenses and other assets		(3,494)		(14,303)		(17,915)
Accounts payable		15,422		229,334		(95,636)
Accrued compensation and employee benefits		(34,803)		65,482		12,277
Accrued expenses and other liabilities		(54,067)		60,734		129,916
Accrued taxes		(62,417)		88,190		(5,412)
Contributions to employee benefit plans		(12,890)		(14,383)		(19,801)
Net cash provided by operating activities		805,724		1,115,865		1,104,810
Investing Activities:						
Additions to property, plant and equipment		(220,962)		(171,465)		(165,692)
Acquisitions (net of cash and cash equivalents acquired)		(312,855)		(1,112,075)		(335,786)
Proceeds from sale of property, plant and equipment		6,061		7,070		7,207
Proceeds from dispositions		_		274,982		15,400
Other		(13,168)		8,735		(2,508)
Net cash used in investing activities		(540,924)		(992,753)		(481,379)
Financing Activities:						
Change in commercial paper and other short-term borrowings, net		629,891		105,000		(84,700)
Dividends to stockholders		(287,551)		(286,896)		(284,312)
Repurchase of common stock, including accelerated share repurchase program		(585,000)		(21,637)		(106,279)
Payments to settle employee tax obligations on exercise of share-based awards		(14,637)		(41,924)		(28,476)
Other		(2,968)		(4,423)		(2,523)
Net cash used in financing activities		(260,265)	_	(249,880)	_	(506,290)
Effect of exchange rate changes on cash and cash equivalents		(9,171)		(803)		(1,319)
Net (decrease) increase in cash and cash equivalents	_	(4,636)		(127,571)		115,822
Cash and cash equivalents at beginning of year		385,504		513,075		397,253
Cash and cash equivalents at end of year	\$	380,868	\$	385,504	\$	513,075
Supplemental information - cash paid during the year for:		,	_		Ť	,-,-
Income taxes	\$	354,468	\$	233,631	\$	199,657
Interest		112,469		102,139		108,119
		,		,		,

(Amounts in thousands except share data and where otherwise indicated)

1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Dover Corporation ("Dover" or "Company") is a diversified global manufacturer and solutions provider delivering innovative equipment and components, consumable supplies, aftermarket parts, software and digital solutions and support services. The Company's businesses are based primarily in the United States and Europe with manufacturing and other operations throughout the world. The Company operates through five business segments that are structured around similar business models, go-to market strategies and manufacturing practices: Engineered Products, Clean Energy & Fueling, Imaging & Identification, Pumps & Process Solutions and Climate & Sustainability Technologies. For additional information on the Company's segments, see Note 19 — Segment Information.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation. The results of operations of acquired businesses are included from the dates of acquisitions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements and accompanying disclosures. These estimates may be adjusted due to changes in future economic, industry, or customer financial conditions, as well as changes in technology or demand. Estimates are used for, but not limited to, allowances for doubtful accounts receivable, net realizable value of inventories, restructuring reserves, warranty reserves, pension and post-retirement plans, stock-based compensation, useful lives for depreciation and amortization of long-lived assets including finite-lived intangibles, future cash flows associated with impairment testing for goodwill, indefinite-lived intangible assets and other long-lived assets, deferred tax assets, unrecognized tax benefits and contingencies. Actual results may ultimately differ from these estimates, although management does not believe such differences would materially affect the consolidated financial statements in any individual year. Estimates and assumptions are periodically reviewed and the effects of changes in these estimates and assumptions are reflected in the Consolidated Financial Statements in the period that they are determined.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, demand deposits and short-term investments, which are highly liquid in nature and have original maturities at the time of purchase of three months or less. The carrying value of cash and cash equivalents approximates fair value.

Accounts Receivable and Allowance for Credit Losses

Accounts receivable are recorded at face amounts less an allowance for credit losses. The allowance is an estimate based on historical collection experience, current and future economic and market conditions and a review of the current status of each customer's trade accounts receivable. Management evaluates the aging of the accounts receivable balances and the financial condition of its customers and all other forward-looking information that is reasonably available to estimate the amount of accounts receivable that may not be collected in the future and records the appropriate provision. See Note 8 — Credit Losses for additional information.

Inventories

Inventories are stated at the lower of cost, determined on the first-in, first-out (FIFO) basis, or net realizable value. An immaterial portion of domestic inventories is stated at cost, determined on the last-in, first-out (LIFO) basis, which is less than net realizable value.

(Amounts in thousands except share data and where otherwise indicated)

Property, Plant and Equipment

Property, plant and equipment includes the historical cost of land, buildings, machinery and equipment, purchased software, finance lease assets and significant improvements to existing plant and equipment or, in the case of acquisitions, the fair value of acquired assets. Expenditures for maintenance, repairs and minor renewals are expensed as incurred. When property or equipment is sold or otherwise disposed of, the related cost and accumulated depreciation are removed from the respective accounts and the gain or loss realized on disposition is reflected in earnings. The Company depreciates its assets on a straight-line basis over their estimated useful lives as follows: buildings and improvements 5 to 31.5 years; machinery and equipment 3 to 15 years; furniture and fixtures 3 to 7 years; vehicles 3 to 7 years; and software 3 to 10 years.

Derivative Financial Instruments

The Company uses derivative financial instruments to hedge its exposures to various risks, including foreign currency exchange rate risk. The Company does not enter into derivative financial instruments for speculative purposes and does not have a material portfolio of derivative financial instruments. Derivative financial instruments used for hedging purposes must be designated and effective as a hedge of the identified risk exposure at inception of the contract. The Company recognizes all derivatives as either assets or liabilities on the consolidated balance sheet and measures those instruments at fair value. For derivatives designated as hedges of the fair value of assets or liabilities, the changes in fair value of both the derivatives and of the hedged items are recorded in current earnings. For derivatives designated as cash flow hedges, the change in the fair value of the derivatives is recorded as a component of other comprehensive earnings and subsequently recognized in net earnings when the hedged items impact earnings.

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price over the fair value of net assets acquired. Goodwill and certain other intangible assets deemed to have indefinite lives (primarily trademarks) are not amortized. For goodwill, impairment tests are required at least annually, or more frequently if events or circumstances indicate that it may be impaired, when some portion but not all of a reporting unit is disposed of or classified as assets held for sale, or when a change in the composition of reporting units occurs for other reasons, such as a change in segments. Based on its current organizational structure, the Company identified reporting units for which cash flows are determinable and to which goodwill was allocated.

The Company performs its goodwill impairment test annually in the fourth quarter at the reporting unit level. A quantitative test is used to determine existence of goodwill impairment and the amount of the impairment loss at the reporting unit level. The quantitative test compares the fair value of a reporting unit with its carrying amount, including goodwill. The Company uses an income-based valuation method, determining the present value of estimated future cash flows, to estimate the fair value of a reporting unit. If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. Factors used in the impairment analysis require significant judgment, and actual results may differ from assumed and estimated amounts. The Company uses its own market assumptions including internal projections of future cash flows, discount rates and other assumptions considered reasonable in the analysis and reflective of market participant assumptions. These forecasts are based on historical performance and future estimated results. The discount rates utilized are based on a capital asset pricing model and published relevant industry rates, which take into consideration the risks and uncertainties inherent to the reporting units and in the internally developed forecasts. See Note 9 — Goodwill and Other Intangible Assets for further discussion of the Company's annual goodwill impairment test and results. No impairment of goodwill was required for the years ended December 31, 2022, 2021, or 2020.

The Company uses an income-based valuation method to annually test its indefinite-lived intangible assets for impairment. The fair value of the intangible asset is compared to its carrying value. This method uses the Company's own market assumptions, which are considered reasonable. Any excess of carrying value over the estimated fair value is recognized as an impairment loss. No impairment of indefinite-lived intangible assets was required for the years ended December 31, 2022, 2021, or 2020.

Other intangible assets with determinable lives primarily consist of customer intangibles, unpatented technologies, patents and trademarks. The other intangible assets are amortized over their estimated useful lives, ranging from 5 to 20 years.

(Amounts in thousands except share data and where otherwise indicated)

Long-lived assets (including definite-lived intangible assets) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, such as a significant sustained change in the business climate. If an indicator of impairment exists for any grouping of assets, an estimate of undiscounted future cash flows is prepared and compared to its carrying value. If an asset group is determined to be impaired, the loss is measured by the excess of the carrying amount of the asset group over its fair value, as determined by an estimate of discounted future cash flows.

Leases

The Company determines if an arrangement is a lease at inception of a contract. The Company has operating and finance leases for corporate offices, manufacturing plants, research and development facilities, shared services facilities, vehicle fleets and certain office and manufacturing equipment. Operating lease right-of-use ("ROU") assets are included in other assets and deferred charges and operating lease liabilities are included in other accrued expenses and other liabilities in the consolidated balance sheet. Finance lease ROU assets are included in property, plant and equipment, and the related lease liabilities are included in other accrued expenses and other liabilities in the consolidated balance sheet. Leases with an initial term of 12 months or less are not recorded in the balance sheet.

The Company accounts for each separate lease component of a contract and its associated non-lease components as a single lease component, thus causing all fixed payments to be capitalized. Variable lease payment amounts that cannot be determined at the commencement of the lease, such as increases in lease payments based on changes in index rates or usage, are not included in the ROU assets or lease liabilities. These are expensed as incurred and recorded as variable lease expense.

ROU assets represent the Company's right to use an underlying asset during the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date based on the net present value of fixed lease payments over the lease term. The lease term includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. ROU assets also include any advance lease payments made and exclude lease incentives. As most of the Company's operating leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. Finance lease agreements include an interest rate that is used to determine the present value of future lease payments. Fixed operating lease expense and finance lease depreciation expense are recognized on a straight-line basis over the lease term.

Restructuring Accruals

The Company takes actions to reduce headcount, close facilities, or otherwise exit operations. Such restructuring activities at an operation are recorded when management has committed to an exit or reorganization plan and when termination benefits are probable and can be reasonably estimated based on circumstances at the time the restructuring plan is approved by management or when termination benefits are communicated. Exit costs may include contractual terminations and asset impairments as a result of an approved restructuring plan. The accrual of both severance and exit costs requires the use of estimates. Though the Company believes that its estimates accurately reflect the anticipated costs, actual results may be different from the original estimated amounts.

Foreign Currency

Assets and liabilities of non-U.S. subsidiaries, where the functional currency is not the U.S. dollar, have been translated at year-end exchange rates and profit and loss accounts have been translated using weighted-average monthly exchange rates. Foreign currency translation gains and losses are included in the consolidated statements of comprehensive earnings as a component of other comprehensive earnings (loss). Assets and liabilities of an entity that are denominated in currencies other than an entity's functional currency are re-measured into the functional currency using end of period exchange rates, where applicable to certain balances. Gains and losses related to these re-measurements are recorded within the consolidated statements of earnings as a component of other income, net. Gains and losses arising from intercompany foreign currency transactions that are of a long-term investment in nature are reported in the same manner as translation adjustments.

(Amounts in thousands except share data and where otherwise indicated)

Revenue Recognition

The majority of the Company's revenue is generated through the manufacture and sale of a broad range of specialized products and components, with revenue recognized upon transfer of control, title and risk of loss, which is generally upon shipment. Service revenue represents less than 5% of total revenue and is recognized as the services are performed. In limited cases, revenue arrangements with customers require delivery, installation, testing, certification, or other acceptance provisions to be satisfied before revenue is recognized. The Company includes shipping costs billed to customers in revenue and the related shipping costs in cost of goods and services.

Stock-Based Compensation

The principal awards issued under the Company's stock-based compensation plans include non-qualified stock appreciation rights ("SARs"), restricted stock units ("RSUs") and performance share awards ("PSAs"). The cost for such awards is measured at the grant date based on the fair value of the award. At the time of grant, the Company estimates forfeitures, based on historical experience, in order to estimate the portion of the award that will ultimately vest. The value of the portion of the award that is expected to ultimately vest is recognized as expense on a straight-line basis, generally over the explicit service period of three years (except for retirement-eligible employees) and is included in selling, general and administrative expenses in the consolidated statements of earnings. Expense for awards granted to retirement-eligible employees is recorded over the period from the date of grant through the date the employee first becomes eligible to retire and is no longer required to provide service. See Note 15 — Equity and Cash Incentive Program for additional information related to the Company's stock-based compensation.

Income Taxes

The provision for income taxes includes federal, state, local and non-U.S. taxes. Tax credits, primarily for research and experimentation, are recognized as a reduction of the provision for income taxes in the year in which they are available for tax purposes. Deferred taxes are provided using enacted rates on the future tax consequences of temporary differences. Temporary differences between the financial statement carrying amounts of assets and liabilities and their respective tax basis and the tax benefit of carryforwards. A valuation allowance is established for deferred tax assets for which it is more likely than not that some portion or all of the deferred tax benefit will not be realized. In assessing the need for a valuation allowance, management considers all available evidence, including the future reversal of existing taxable temporary differences, taxable income in carryback periods, prudent and feasible tax planning strategies and estimated future taxable income. The valuation allowance can be affected by changes to tax regulations, interpretations and rulings, changes to enacted statutory tax rates and changes to future taxable income estimates.

Tax benefits are recognized from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position in consideration of applicable tax statutes and related interpretations and precedents. Tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized on ultimate settlement.

Research and Development Costs

Research and development costs, including qualifying engineering costs, are expensed when incurred and amounted to \$163,300 in 2022, \$157,826 in 2021 and \$142,101 in 2020. These costs as a percent of revenue were 1.9% in 2022, 2.0% in 2021 and 2.1% in 2020. Research and development costs are reported within selling, general and administrative expenses in the consolidated statements of earnings.

Advertising Costs

Advertising costs are expensed when incurred and amounted to \$25,905 in 2022, \$23,685 in 2021 and \$21,375 in 2020. Advertising costs are reported within selling, general and administrative expenses in the consolidated statements of earnings.

(Amounts in thousands except share data and where otherwise indicated)

Risk, Retention, Insurance

The Company's insurance programs contain various deductibles that, based on the Company's experience, are typical and customary for a company of its size and risk profile. The Company does not consider any of the deductibles to represent a material risk to the Company. The Company generally maintains insurance policies with deductibles for claims and liabilities related primarily to workers' compensation, health and welfare claims, general liability, product and automobile liability, cybersecurity risks, property damage and business interruption resulting from certain events. The Company accrues for claim exposures that are probable of occurrence and can be reasonably estimated.

Recent Accounting Pronouncements

Recently Issued Accounting Standards

The following accounting standards updates ("ASU"), issued by the Financial Accounting Standards Board ("FASB"), will, or are expected to, result in a change in practice and/or have a financial impact to the Company's Consolidated Financial Statements:

In September 2022, the FASB issued ASU No. 2022-04 Liabilities-Supplier Finance Programs (Topic 405-50): Disclosure of Supplier Finance Program Obligations. The amendments in this update require a buyer in a supplier finance program to disclose information about the program's nature, activity during the period, changes from period to period, and potential magnitude. The guidance will become effective January 1, 2023 and early adoption is permitted. Management is currently evaluating the impact of adopting this ASU on the Company's Consolidated Financial Statements.

Recently Adopted Accounting Standards

In October 2021, the FASB issued ASU No. 2021-08 Business Combinations (Topic 805)-Accounting for Contract Assets and Contract Liabilities from Contracts with Customers. The amendments in this update require that an acquirer recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, Revenue from Contracts with Customers, as if the acquirer had originated the contracts. Under current guidance, the acquirer generally recognizes such contract assets and contract liabilities at fair value on the acquisition date. The amendments in this update are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The amendments in this update should be applied prospectively to business combinations occurring on or after the effective date of the amendments. Early adoption of the amendments is permitted, including adoption in an interim period. The Company early adopted the guidance as of January 1, 2022, which did not have a material impact on the Company's Consolidated Financial Statements.

In March 2020 and January 2021, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting and ASU No. 2021-01, Reference Rate Reform, Scope, respectively. In December 2022, the FASB issued ASU No. 2022-06, Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848 as an update to ASU No. 2020-04. These updates provide optional guidance for a limited time to ease the potential burden in accounting for (or recognizing the effects of) reference rate reform, including expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The amendments in these updates are elective and are effective upon issuance for all entities. The Company adopted the guidance, which did not have a material impact on the Company's Consolidated Financial Statements.

2. Revenue

Revenue from contracts with customers

A majority of the Company's revenue is short cycle in nature with shipments within one year from order. A small portion of the Company's revenue derives from contracts extending over one year. The Company's payment terms generally range between 30 to 90 days and vary by the location of businesses, the type of products manufactured to be sold and the volume of products sold, among other factors.

(Amounts in thousands except share data and where otherwise indicated)

Disaggregation of Revenue

Revenue from contracts with customers is disaggregated by segment and geographic location, as they best depict the nature and amount of the Company's revenue.

See Note 19 — Segment Information for revenue by segment and geographic location.

Performance Obligations

A majority of the Company's contracts have a single performance obligation which represents, in most cases, the equipment or product being sold to the customer. Some contracts include multiple performance obligations such as a product and the related installation, extended warranty, software and digital solutions, and/or maintenance services. These contracts require judgment in determining the number of performance obligations.

The Company has elected to use the practical expedient to not adjust the promised amount of consideration for the effects of a significant financing component if it is expected, at contract inception, that the period between when the Company transfers a promised good or service to a customer, and when the customer pays for that good or service, will be one year or less. Thus, the Company may not consider an advance payment to be a significant financing component, if it is received less than one year before product completion.

The majority of the Company's contracts offer assurance-type warranties in connection with the sale of a product to a customer. Assurance-type warranties provide a customer with assurance that the related product will function as the parties intended because it complies with agreed-upon specifications. Such warranties do not represent a separate performance obligation.

The Company may also offer service-type warranties that provide services to the customer, in addition to the assurance that the product complies with agreed-upon specifications. If a warranty is determined to be a service-type warranty, it represents a distinct service and is treated as a separate performance obligation.

Estimates are used to determine the amount of variable consideration in contracts, the standalone selling price among separate performance obligations and the measure of progress for contracts where revenue is recognized over time. The Company reviews and updates these estimates regularly.

Some contracts with customers include variable consideration primarily related to volume rebates. The Company estimates variable consideration at the most likely amount to determine the total consideration which the Company expects to be entitled. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The Company's estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of anticipated performance and all information (historical, current and forecasted) that is reasonably available.

For contracts with multiple performance obligations, the Company allocates the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. The Company uses an observable price to determine the standalone selling price for separate performance obligations or a cost plus margin approach when one is not available.

Over 95% of the Company's performance obligations are recognized at a point in time, rather than over time, as the Company completes its performance obligations. Specifically, revenue is recognized when control transfers to the customer, typically upon shipment or completion of installation, testing, certification, or other substantive acceptance provisions required under the contract. Less than 5% of the Company's revenue is recognized over time and relates to the sale of equipment or services in which the Company transfers control of a good or service over time and the customer simultaneously receives and consumes the benefits as the Company performs, or our performance creates or enhances an asset the customer controls as the asset is created or enhanced, or our performance does not create an asset with an alternative use to the Company and the Company has an enforceable right to payment for its performance to date plus a reasonable margin.

(Amounts in thousands except share data and where otherwise indicated)

For revenue recognized over time, there are two types of methods for measuring progress and both are relevant to the Company: (1) input methods and (2) output methods. Although this may vary by business, input methods generally are based on costs incurred relative to estimated total costs. Output methods generally are based on a measurement of progress, such as milestone achievement. The businesses use the method and measure of progress that best depicts the transfer of control to the customer of the goods or services to date relative to the remaining goods or services promised under the contract.

Transaction Price Allocated to the Remaining Performance Obligations

At December 31, 2022, we estimated that \$296,698 in revenue is expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period. We expect to recognize approximately 63.1% of our unsatisfied (or partially unsatisfied) performance obligations as revenue in 2023, with the remaining balance to be recognized in 2024 and thereafter.

Remaining consideration, including variable consideration, from contracts with customers is included in the amounts presented in the preceding paragraph and pertains to contracts with multiple performance obligations, extended warranties on products and multi-year agreements, which are typically recognized as the performance obligation is satisfied.

The Company applied the standard's practical expedient that permits the omission of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which the Company recognizes revenue at the amount to which the Company has the right to invoice for services performed.

Contract Balances

The following table provides information about contract assets and contract liabilities from contracts with customers:

	Decem	ber 31, 2022	December 31, 2021	December 31, 2020
Contract assets	\$	11,074	\$ 11,440	\$ 15,020
Contract liabilities - current		256,933	227,549	184,845
Contract liabilities - non-current		19,879	21,513	13,921

Contract assets primarily relate to the Company's right to consideration for work completed but not billed at the reporting date and are recorded in prepaid and other current assets in the consolidated balance sheets. Contract assets are transferred to receivables when the right to consideration becomes unconditional. Contract liabilities relate to advance consideration received from customers or advance billings for which revenue has not been recognized. Current contract liabilities are recorded in deferred revenue and non-current contract liabilities are recorded in other liabilities in the consolidated balance sheets. Contract liabilities are reduced when the associated revenue from the contract is recognized. The increase in current contract liabilities presented above primarily relates to advance payments received from customers.

The revenue recognized during 2022 and 2021 that was included in the contract liabilities at the beginning of the respective periods amounted to \$196,891 and \$163,546, respectively.

Contract Costs

Costs incurred to obtain a customer contract are not material to the Company. The Company elected to apply the practical expedient to not capitalize contract costs to obtain contracts with a duration of one year or less, which are expensed and included within cost of goods and services in the consolidated statements of earnings.

(Amounts in thousands except share data and where otherwise indicated)

3. Acquisitions

2022

During the year ended December 31, 2022, the Company acquired three businesses in separate transactions for total consideration of \$312,855, net of cash acquired and inclusive of measurement period adjustments. Of these transactions, one includes additional consideration contingent on achieving certain financial performance targets. These businesses were acquired to complement and expand upon existing operations within the Pumps & Process Solutions segment. The goodwill recorded as a result of these acquisitions represents the economic benefits expected to be derived from product line expansions and operational synergies. The goodwill is non-deductible for U.S. income tax purposes for these acquisitions.

Malema

On July 1, 2022, the Company acquired 99.7% of the equity interests in Malema Engineering Corporation and its related foreign entities ("Malema"), a designer and manufacturer of flow measurement and control instruments serving customers in the biopharmaceutical, semiconductor and industrial sectors, for \$223,462, net of cash acquired and inclusive of the impact of measurement period adjustments discussed below, subject to contingent consideration. During the fourth quarter of 2022, the Company acquired the remaining 0.3% of equity interests in Malema. The Malema acquisition expands the Company's biopharma single-use production offering within the Pumps & Process Solutions segment. The contingent consideration is based upon meeting certain financial performance targets for each twelve-month period over the next two years from March 31, 2022, with a maximum potential payout of \$50,000. No value is attributed to the current estimated fair value of contingent earn-out liability, which will be reassessed quarterly during the performance periods. In connection with this acquisition, the Company recorded goodwill of \$153,082 and intangible assets of \$64,000 for customer intangibles, \$16,000 for patents, and \$4,000 for trademarks. The fair value for customer intangibles at the acquisition date was determined using the multi-period excess earnings method under the income approach. The fair value measurements of intangible assets are based on significant unobservable inputs, and thus represent Level 3 inputs. Significant assumptions used in assessing the fair values of intangible assets include discounted future cash flows, customer attrition rates and discount rates. The fair values of the assets acquired and liabilities assumed, and the related tax balances, are based on preliminary estimates and assumptions. These preliminary estimates and assumptions could change significantly during the measurement period as the Company finalizes the valuations of the assets acquired and liabilities assumed, and the related tax balances. During the year ended December 31, 2022, the Company recorded measurement period adjustments primarily related to its preliminary treatment of certain liabilities. These adjustments are based on facts and circumstances that existed, but were not known, as of the acquisition date which resulted in an increase in goodwill of \$1,381.

The following presents the preliminary allocation of purchase price to the assets acquired and liabilities assumed under the Malema acquisition, based on their estimated fair values at acquisition date:

	Total
Current assets, net of cash acquired	\$ 8,985
Property, plant and equipment	2,733
Goodwill	153,082
Intangible assets	84,000
Other assets and deferred charges	1,159
Current liabilities	(4,487)
Non-current liabilities	(22,010)
Net assets acquired	\$ 223,462

Other acquisitions

On December 14, 2022, the Company acquired 100% of the equity interests in Witte Pumps & Technology GmbH ("Witte"), a manufacturer of precision gear pumps, for \$81,293, net of cash acquired. The Witte acquisition expands the Company's reach into gear pump manufacturing and associated spare parts and services for the chemical, plastics and polymer processing, food and beverage, and pharmaceutical industries within the Pumps & Process Solutions segment. In connection with this acquisition, the Company recorded goodwill of \$45,528 and intangible assets of \$34,791, primarily related to customer intangibles.

(Amounts in thousands except share data and where otherwise indicated)

On May 2, 2022, the Company acquired 100% of the equity interests in AMN DPI ("AMN"), a designer and manufacturer of polymer pelletizing tools, for \$8,100, net of cash acquired. The AMN acquisition extends the Company's reach into polymer processing equipment production within the Pumps & Process Solutions segment. In connection with this acquisition, the Company recorded goodwill of \$1,903 and intangible assets of \$5,625, primarily related to customer intangibles.

The following presents, for the two acquisitions other than Malema, the preliminary allocation of purchase price to the assets acquired and liabilities assumed, based on their estimated fair values at acquisition date:

	Total
Current assets, net of cash acquired	\$ 23,369
Property, plant and equipment	4,325
Goodwill	47,431
Intangible assets	40,416
Other assets and deferred charges	20
Current liabilities	(13,614)
Non-current liabilities	(12,554)
Net assets acquired	\$ 89,393

The amounts assigned to goodwill and major intangible asset classifications for all 2022 acquisitions were as follows:

	Amount llocated	Usefu (in yo	-
Goodwill - non-deductible	\$ 200,513	n	a
Customer intangibles	90,657	10 -	15
Patents	16,000	1	0
Unpatented technology	10,355	8	
Trademarks	7,404	1:	5
	\$ 324,929		

2021

During the year ended December 31, 2021, the Company acquired nine businesses in separate transactions for total consideration of \$1,125,786, net of cash acquired of \$18,475, including contingent consideration of \$13,002 and measurement period adjustments discussed below. These businesses were acquired to complement and expand upon existing operations within the Clean Energy & Fueling, Engineered Products, Imaging & Identification, and Pumps & Process Solutions segments. The goodwill recorded as a result of these acquisitions represents the economic benefits expected to be derived from product line expansions and operational synergies. Goodwill of \$200,117 is deductible for income tax purposes and \$384,269 is non-deductible for income tax purposes for these acquisitions.

RegO

On December 28, 2021, the Company acquired 100% of the voting stock of ECI Holding Company, LLC ("RegO"), a provider of highly-engineered components and services that facilitate the production, storage, and distribution of cryogenic gases, for \$626,618, net of cash acquired and inclusive of the impact of measurement period adjustments discussed below. The RegO acquisition strengthens the Company's offering for the hydrogen ("H2"), liquefied natural gas ("LNG"), and liquefied petroleum gas ("LPG") applications, as well as Dover's participation in the attractive cryogenic industrial gases end market within the Clean Energy & Fueling segment. In connection with this acquisition, the Company recorded goodwill of \$170,800 deductible for income tax purposes and \$110,363 non-deductible for income tax purposes and intangible assets of \$173,000 for customer intangibles, \$40,000 for patents and \$21,000 for trademarks. The fair value for customer intangibles at the acquisition date was determined using the multi-period excess earnings method under the income approach. The fair value measurements of intangible assets are based on significant unobservable inputs, and thus represent Level 3 inputs. Significant assumptions used in assessing the fair values of intangible assets include discounted future cash flows, customer attrition rates and discount rates. The fair value of assets acquired also includes trade receivables of \$33,900. The gross amount is \$34,606, of which \$706 is expected to be uncollectible. During the year ended December 31, 2022, the Company recorded

(Amounts in thousands except share data and where otherwise indicated)

measurement period adjustments primarily related to deferred taxes and changes in net working capital. These adjustments are based on facts and circumstances that existed, but were not known, as of the acquisition date which resulted in an increase in goodwill of \$4,187.

The following presents the allocation of purchase price, net of cash acquired of \$10,382, to the assets acquired and liabilities assumed under the RegO acquisition, based on their estimated fair values at acquisition date:

	Total
Accounts receivable	\$ 33,900
Inventories	71,529
Other current assets	2,958
Property, plant and equipment	50,027
Goodwill	281,163
Intangible assets	234,000
Other assets and deferred charges	884
Current liabilities	(20,150)
Non-current liabilities	(27,693)
Net assets acquired	\$ 626,618

Acme Cryogenics

On December 16, 2021, the Company acquired 100% of the voting stock of Acme Cryo Intermediate Inc. ("Acme Cryogenics"), a provider of highly-engineered components and services that facilitate the production, storage, and distribution of cryogenic gases, for \$292,306, net of cash acquired and inclusive of the impact of measurement period adjustments discussed below. The Acme Cryogenics acquisition strengthens the Company's offering for the H2, LNG, and LPG applications, as well as Dover's participation in the attractive cryogenic industrial gases end market within the Clean Energy & Fueling segment. In connection with this acquisition, the Company recorded goodwill of \$167,291 non-deductible for income tax purposes and intangible assets of \$99,000 for customer intangibles, \$21,800 for unpatented technology and \$6,500 for trademarks. The fair value for customer intangibles at the acquisition date was determined using the multi-period excess earnings method under the income approach. The fair value measurements of intangible assets are based on significant unobservable inputs and thus represent Level 3 inputs. Significant assumptions used in assessing the fair values of intangible assets include discounted future cash flows, customer attrition rates and discount rates. The fair value of assets acquired also includes trade receivables of \$14,644. The gross amount is \$14,912, of which \$268 is expected to be uncollectible. During the year ended December 31, 2022, the Company recorded measurement period adjustments primarily related to deferred taxes and changes in net working capital. These adjustments are based on facts and circumstances that existed, but were not known, as of the acquisition date which resulted in a decrease in goodwill of \$1,918.

The following presents the allocation of purchase price to the assets acquired and liabilities assumed under the Acme Cryogenics acquisition, based on their estimated fair values at acquisition date:

	Total
Current assets, net of cash acquired	\$ 25,932
Property, plant and equipment	8,640
Goodwill	167,291
Intangible assets	127,300
Other assets and deferred charges	5,057
Current liabilities	(7,286)
Non-current liabilities	(34,628)
Net assets acquired	\$ 292,306

Other acquisitions

On October 15, 2021, the Company acquired 100% of the voting stock of LIQAL B.V. ("LIQAL"), a turnkey supplier of LNG, hydrogen refueling equipment and solutions, and micro liquefaction solutions, for \$27,701, net of cash acquired and including contingent consideration. The LIQAL acquisition strengthens the Company's offering of LNG and hydrogen

(Amounts in thousands except share data and where otherwise indicated)

products and solutions, as well as significant innovation capabilities and proprietary technologies, within the Clean Energy & Fueling segment. In connection with this acquisition, the Company recorded goodwill of \$23,473 and intangible assets of \$8,235, primarily related to customer intangibles.

On September 15, 2021, the Company acquired 100% of the voting stock of The Espy Corporation ("Espy"), a manufacturer of advanced electronic radio frequency sensor systems, for \$60,457, net of cash acquired. The Espy acquisition strengthens the Company's offering of complete signal intelligence systems with integrated software within the Engineered Products segment. In connection with this acquisition, the Company recorded goodwill of \$29,317 and intangible assets of \$21,100, primarily related to customer intangibles. The Espy acquisition was treated as an asset acquisition for U.S. income tax purposes, resulting in the goodwill and intangibles being classified as tax deductible.

On July 23, 2021, the Company acquired 100% of the voting stock of CDS Visual, Inc. ("CDS Visual"), a leading provider of 3D visualization solutions tailored for industrial applications, for \$29,147, net of cash acquired. The CDS Visual acquisition extends the Company's reach of customer-facing digital capabilities within the Engineered Products segment. In connection with this acquisition, the Company recorded goodwill of \$20,863 and intangible assets of \$9,930, primarily related to technology.

On June 24, 2021, the Company acquired 100% of the voting stock of Blue Bite LLC ("Blue Bite"), a leading provider of consumer engagement and brand protection software solutions, for \$30,143, net of cash acquired and including contingent consideration. The Blue Bite acquisition strengthens the Company's offering of product traceability and authentication solutions within the Imaging & Identification segment. In connection with this acquisition, the Company recorded goodwill of \$20,458 and intangible assets of \$13,250, primarily related to technology.

On June 23, 2021, the Company acquired 100% of the voting stock of Quantex Arc Limited ("Quantex"), a leading provider of single-use, recyclable pumps, for \$23,747, net of cash acquired and including contingent consideration. The Quantex acquisition enhances the offering of single-use pumps for biopharma and other hygienic applications within the Pumps & Process Solutions segment. In connection with this acquisition, the Company recorded goodwill of \$14,327 and intangible assets of \$11,034, primarily related to patented technology.

On April 19, 2021, the Company acquired 100% of the voting stock of AvaLAN Wireless Systems Incorporated ("AvaLAN"), a leading provider of secure wireless communications solutions for the convenience and fuel retail industry, for \$34,144, net of cash acquired. The AvaLAN acquisition extends the Company's reach into the systems and software offering within the Clean Energy & Fueling segment. In connection with this acquisition, the Company recorded goodwill of \$26,803 and intangible assets of \$14,630, primarily related to customer intangibles.

One other immaterial acquisition was completed during the year ended December 31, 2021, within the Pumps & Process Solutions segment.

The following presents, for the seven acquisitions other than RegO and Acme Cryogenics, the allocation of purchase price to the assets acquired and liabilities assumed, based on their estimated fair values at acquisition date:

	Total
Current assets, net of cash acquired	\$ 12,751
Property, plant and equipment	8,272
Goodwill	135,932
Intangible assets	78,179
Other assets and deferred charges	4,485
Current liabilities	(15,368)
Non-current liabilities	(17,389)
Net assets acquired	\$ 206,862

(Amounts in thousands except share data and where otherwise indicated)

The amounts assigned to goodwill and major intangible asset classifications for all 2021 acquisitions were as follows:

	Amount allocated		Useful (in yea		-
Goodwill - tax deductible	\$	200,117		na	
Goodwill - non deductible		384,269		na	
Customer intangibles		310,819	12	-	15
Patents		49,056	7	-	12
Unpatented technology		44,180	7	-	12
Trademarks		35,424	15	-	16
	\$	1,023,865			

2020

During the year ended December 31, 2020, the Company acquired six businesses in separate transactions for total consideration of \$335,786, net of cash acquired. On December 30, 2020, the Company acquired 100% of the voting stock of Innovative Control Systems, Inc. ("ICS"), within the Clean Energy & Fueling segment, for \$77,030, net of cash acquired. On August 20, 2020, the Company acquired 100% of the voting stock of Solaris Laser S.A. ("Solaris"), within the Imaging & Identification segment, for \$18,680, net of cash acquired. On April 30, 2020, the Company acquired 100% of the voting stock of Em-tec GmbH ("Em-tec"), within the Pumps & Process Solutions segment, for \$30,396, net of cash acquired. On February 18, 2020, the Company acquired 100% of the voting stock of So. Cal. Soft-Pak, Incorporated ("Soft-Pak"), within the Engineered Products segment, for \$45,500, net of cash acquired. On January 24, 2020, the Company acquired 100% of the voting stock of Sys-Tech Solutions, Inc. ("Systech"), within the Imaging & Identification segment, for \$161,830, net of cash acquired. One other immaterial acquisition was completed during the year ended December 31, 2020, within the Pumps & Process Solutions segment.

The following presents the allocation of purchase price to the assets acquired and liabilities assumed, based on their estimated fair values at acquisition date:

	Total
Current assets, net of cash acquired	\$ 44,159
Property, plant and equipment	8,424
Goodwill	205,805
Intangible assets	134,049
Other assets and deferred charges	12,986
Current liabilities	(34,803)
Non-current liabilities	(34,834)
Net assets acquired	\$ 335,786

The amounts assigned to goodwill and major intangible asset classifications were as follows:

	Amount allocated				-
Goodwill - tax deductible	\$	33,183		na	
Goodwill - non deductible		172,622		na	
Customer intangibles		103,310	10	-	14
Unpatented technology		21,125	5	-	9
Trademarks		9,614		15	
	\$	339,854			

(Amounts in thousands except share data and where otherwise indicated)

Pro forma Information (Unaudited)

The following unaudited pro forma results of operations reflect the 2021 acquisitions of RegO and Acme Cryogenics as if they had occurred on January 1, 2020. The pro forma information is not necessarily indicative of the results that actually would have occurred, nor does it indicate future operating results of the combined companies. The pro forma earnings are adjusted to reflect the comparable impact of additional depreciation and amortization expense, net of tax, resulting from the fair value measurement of tangible and intangible assets; nonrecurring acquisition-related costs, net of tax, of \$5,855; and inventory step-up charges, net of tax, of \$15,082. These unaudited pro forma adjustments are based upon purchase price allocations. The actual revenues and earnings for RegO and Acme Cryogenics from the date of acquisition on December 28, 2021 and December 16, 2021, respectively, to December 31, 2021 were not material.

Years Ended December 31,			
20			
83,760			
20,929			
83,451			
69,458			
58			

The pro forma results for the remaining seven acquisitions in 2021, as well as the acquisitions in 2022 and 2020 are not presented as they are not considered material.

4. Dispositions

Management evaluates Dover's businesses periodically for their strategic fit within its operations and may from time to time sell or discontinue certain operations for various reasons.

2022

There was one immaterial disposition in 2022.

2021

On December 1, 2021, the Company completed the sale of Unified Brands ("UB"), a wholly owned subsidiary of the Company within the Climate & Sustainability Technologies segment. The Company recognized total consideration of \$229,024. This sale resulted in a pre-tax gain on disposition of \$181,615 included within the consolidated statements of earnings for the year ended December 31, 2021. The sale did not represent a strategic shift that had a major effect on operations and financial results and, therefore, did not qualify for presentation as a discontinued operation.

On November 16, 2021, the Company disposed of Race Winning Brands ("RWB"), an equity method investment within the Engineered Products segment for a total consideration of \$45,958, resulting in a recognized gain of \$24,723 included within the consolidated statements of earnings for the year ended December 31, 2021.

2020

On March 6, 2020, the Company completed the sale of the Chino, California branch of The AMS Group ("AMS Chino"), a wholly owned subsidiary of the Company. The Company recognized total consideration of \$15,400, which included a working capital adjustment. This sale resulted in a pre-tax gain on disposition of \$5,213 included within the consolidated statements of earnings for the year ended December 31, 2020. The sale did not represent a strategic shift that had a major effect on operations and financial results and, therefore, did not qualify for presentation as a discontinued operation.

(Amounts in thousands except share data and where otherwise indicated)

5. Inventories, net

The components of inventories, net were as follows:

	December 31, 2022	December 31, 2021
Raw materials	\$ 812,066	\$ 671,195
Work in progress	230,865	271,659
Finished goods	458,881	377,800
Subtotal	1,501,812	1,320,654
Less reserves	(135,204)	(129,559)
Total	\$ 1,366,608	\$ 1,191,095

At December 31, 2022 and 2021, approximately 4% of the Company's total inventories were accounted for using the LIFO method.

6. Property, Plant and Equipment, net

The components of property, plant and equipment, net were as follows:

	December 31, 2022	December 31, 2021
Land	\$ 62,495	\$ 63,656
Buildings and improvements	620,500	582,314
Machinery, equipment and other	1,895,502	1,816,473
Property, plant and equipment, gross	2,578,497	2,462,443
Total accumulated depreciation	(1,573,672)	(1,505,133)
Property, plant and equipment, net	\$ 1,004,825	\$ 957,310

Total depreciation expense was \$148,910, \$147,309 and \$140,008 for the years ended December 31, 2022, 2021 and 2020, respectively.

7. Leases

The Company's ROU assets and lease liabilities are discussed in detail in Note 1 — Description of Business and Summary of Significant Accounting Policies.

The components of lease costs were as follows:

	 Years Ended December 31,							
	 2022		2021		2020			
Operating Lease Costs:								
Fixed	\$ 53,428	\$	54,397	\$	52,875			
Variable	7,512		6,281		5,973			
Short-term	22,097		17,847		18,436			
Total ⁽¹⁾	\$ 83,037	\$	78,525	\$	77,284			

⁽¹⁾ Finance lease cost and sublease income were immaterial.

(Amounts in thousands except share data and where otherwise indicated)

Supplemental cash flow information related to leases was as follows:

	Years Ended December 31,						
		2022		2021		2020	
Cash paid for amounts included in the measurement of lease liabilities:							
Operating cash flows for operating leases	\$	54,268	\$	55,921	\$	53,903	
Operating cash flows for finance leases		335		357		434	
Financing cash flows for finance leases		2,917		3,073		2,523	
Total	\$	57,520	\$	59,351	\$	56,860	
Right-of-use assets obtained in exchange for lease obligations:							
Operating leases	\$	57,190	\$	47,666	\$	21,381	
Financing leases		3,149		2,016		3,708	
Total	\$	60,339	\$	49,682	\$	25,089	

Supplemental balance sheet information related to leases were as follows:

	Dec	December 31, 2022		ecember 31, 2021
Operating Leases				
Right-of-use assets:				
Other assets and deferred charges	\$	197,058	\$	169,022
		_		
Lease liabilities:				
Other accrued expenses	\$	42,649	\$	43,086
Other liabilities		165,741		134,448
Total operating lease liabilities	\$	208,390	\$	177,534
Finance Leases				
Right-of-use assets:				
Property, plant and equipment, net (1)	\$	7,846	\$	8,588
Lease liabilities:				
Other accrued expenses	\$	2,554	\$	2,475
Other liabilities		6,189		6,767
Total finance lease liabilities	\$	8,743	\$	9,242

⁽¹⁾ Finance lease right-of-use assets are recorded net of accumulated depreciation of \$8,017 and \$7,675 for the years ended December 31, 2022 and December 31, 2021, respectively.

The aggregate future lease payments for operating and finance leases as of December 31, 2022 were as follows:

	Ope	erating	Finance		
2023	\$	47,843	\$	2,860	
2024		40,524		2,432	
2025		32,759		1,963	
2026		23,009		1,480	
2027		19,447		816	
Thereafter		81,937		1	
Total lease payments		245,519		9,552	
Less interest		(37,129)		(809)	
Present value of lease liabilities	\$	208,390	\$	8,743	

(Amounts in thousands except share data and where otherwise indicated)

Average lease terms and discount rates were as follows:

	December 31, 2022	December 31, 2021	December 31, 2020
Weighted-average remaining lease term (years)			
Operating leases	7.8	5.8	5.9
Finance leases	3.6	4.2	4.8
Weighted-average discount rate			
Operating leases	3.5 %	2.7 %	2.9 %
Finance leases	3.4 %	3.4 %	3.6 %

8. Credit Losses

Effective January 1, 2020, the Company adopted ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments prospectively. This ASU replaces the incurred loss impairment model with an expected credit loss impairment model for financial instruments, including trade receivables. The amendment requires entities to consider forward-looking information to estimate expected credit losses, resulting in earlier recognition of losses for receivables that are current or not yet due. Upon adoption, the Company recorded a noncash cumulative effect adjustment to retained earnings of \$2.1 million, net of \$0.6 million of income taxes, on the opening consolidated balance sheet as of January 1, 2020.

The Company is exposed to credit losses primarily through sales of products and services. Due to the short-term nature of such receivables, the estimate of amount of accounts receivable that may not be collected is based on aging of the accounts receivable balances and other historical and forward-looking information on the financial condition of the customers. Balances are written off when determined to be uncollectible.

Estimates are used to determine the allowance, based on assessment of anticipated payment and all other historical, current and forward-looking information that is reasonably available.

The following table provides a roll-forward of the allowance for credit losses that is deducted from the amortized cost basis of accounts receivable to present the net amount expected to be collected.

	2022	2021	2020
Beginning Balance, January 1,	\$ 40,126 \$	40,474 \$	29,381
Adoption of ASU No. 2016-13, cumulative-effect adjustment to retained earnings	_	_	2,706
Provision for expected credit losses, net of recoveries	5,552	5,053	11,171
Amounts written off charged against the allowance	(4,462)	(5,307)	(3,863)
Other, including dispositions and foreign currency translation	(1,817)	(94)	1,079
Ending balance, December 31	\$ 39,399 \$	40,126 \$	40,474

(Amounts in thousands except share data and where otherwise indicated)

9. Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying value of goodwill by reportable operating segments were as follows:

	Engineered Products		Clean Energy & Fueling I		Imaging & lentification	0 0		Sus	limate & stainability chnologies	Total
Goodwill	\$	693,576	\$	940,973	\$ 1,117,589	\$	846,250	\$	544,715	\$ 4,143,103
Accumulated impairment loss (1)		(10,591)					(59,970)			(70,561)
Balance at January 1, 2021		682,985		940,973	1,117,589		786,280		544,715	4,072,542
Acquisitions		50,180		496,461	20,458		15,018			582,117
Measurement period adjustments				2,640	(1,926)		_		_	714
Disposition of business					_				(34,662)	(34,662)
Foreign currency translation		(9,882)		(12,383)	(29,919)		(8,459)		(1,246)	(61,889)
Balance at December 31, 2021		723,283		1,427,691	1,106,202		792,839		508,807	4,558,822
Acquisitions		_		_	_		200,513		_	200,513
Measurement period adjustments		(286)		2,432	(1,544)		968		_	1,570
Foreign currency translation		(10,455)		(38,705)	(26,399)		(14,785)		(1,067)	(91,411)
Balance at December 31, 2022	\$	712,542	\$	1,391,418	\$ 1,078,259	\$	979,535	\$	507,740	\$ 4,669,494

⁽¹⁾ Accumulated impairment loss as of December 31, 2022 is not subject to foreign currency translation.

During 2022 and 2021, the Company recognized additions of \$200,513 and \$582,117, respectively, to goodwill as a result of acquisitions as discussed in Note 3 — Acquisitions. There were no dispositions of goodwill during 2022. During 2021, the Company disposed of \$34,662 of goodwill as a result of dispositions of businesses as discussed in Note 4 — Dispositions. The Company reallocated goodwill upon disposal based upon the fair value of the disposed business relative to the remaining entities in its reporting unit.

Annual impairment testing

The Company tests goodwill for impairment annually in the fourth quarter of each year, whenever events or circumstances indicate an impairment may have occurred, or when a change in the composition of reporting units occurs for other reasons, such as a change in segments.

The Company performed its annual goodwill impairment test during the fourth quarter of 2022 using a discounted cash flow analysis as discussed in Note 1 — Description of Business and Summary of Significant Accounting Policies. The Company performed a quantitative goodwill impairment test for each of its reporting units, concluding that the fair values of all of its reporting units were in excess of their carrying values. No impairment of goodwill was required. The discounted cash flow analysis includes management's current assumptions as to future cash flows and long-term growth rates. The discount rates utilized are based on a capital asset pricing model and published relevant industry rates, which take into consideration the risks and uncertainties inherent to the reporting units and in the internally developed forecasts. The discount rate used in the 2022 reporting unit valuations was 9.5%. Further, the Company assessed the current market capitalization, forecasts and the amount of headroom in the 2022 impairment test.

While the Company believes the assumptions used in the 2022 impairment analysis are reasonable and representative of expected results, actual results may differ from expectations.

(Amounts in thousands except share data and where otherwise indicated)

Intangible Assets

The Company's definite-lived and indefinite-lived intangible assets by major asset class were as follows:

	D	ece	mber 31, 202	22	December 31, 2021					
	Gross Amount		ccumulated nortization	Net Carrying Amount	Gross Amount	Accumulated Amortization				Net Carrying Amount
Amortized intangible assets:										
Customer intangibles	\$1,881,402	\$	996,947	\$ 884,455	\$1,829,492	\$	909,776	\$ 919,716		
Trademarks	265,466		132,791	132,675	263,367		116,633	146,734		
Patents	219,199		146,337	72,862	205,910		140,327	65,583		
Unpatented technologies	257,428		137,750	119,678	221,239		123,464	97,775		
Distributor relationships	79,622		57,299	22,323	84,204		55,260	28,944		
Drawings and manuals	26,062		26,062	_	27,792		27,303	489		
Other	20,818		15,620	5,198	22,347		18,775	3,572		
Total	2,749,997		1,512,806	1,237,191	2,654,351		1,391,538	1,262,813		
Unamortized intangible assets:										
Trademarks	96,544		_	96,544	96,709			96,709		
Total intangible assets, net	\$2,846,541	\$	1,512,806	\$1,333,735	\$2,751,060	\$	1,391,538	\$1,359,522		

The Company recorded \$124,416 of acquired intangible assets in 2022. See Note 3 — Acquisitions for further information.

During the year ended December 31, 2022, the Company acquired certain intellectual property assets related to electric refuse collection vehicles for approximately \$29,750, including contingent consideration of up to \$20,000. These assets were classified as unpatented technologies and included in the Engineered Products segment.

Amortization expense was \$158,628, \$142,814 and \$139,043 for the years ended December 31, 2022, 2021 and 2020, respectively, primarily comprised of acquisition-related intangible amortization.

Estimated future amortization expense related to intangible assets held at December 31, 2022 for the next five years is as follows:

	Estimated	Amortization
2023	\$	154,124
2024		149,866
2025		145,857
2026		138,090
2027		135,785

10. Other Accrued Expenses and Other Liabilities

The following table details the major components of other accrued expenses:

	Decem	ber 31, 2022	Decem	ber 31, 2021
Accrued rebates and volume discounts	\$	47,660	\$	52,909
Warranty		43,351		43,449
Operating lease liabilities		42,649		43,086
Taxes other than income (1)		33,782		49,992
Accrued interest		20,591		20,426
Accrued commissions (non-employee)		15,808		16,273
Restructuring and exit costs		14,510		13,797
Other (none of which are individually significant)		99,986		107,165
Total other accrued expenses	\$	318,337	\$	347,097

⁽¹⁾ Taxes other than income includes a \$15.3 million deferral of employment taxes related to the U.S. CARES Act as of December 31, 2021.

(Amounts in thousands except share data and where otherwise indicated)

The following table details the major components of other liabilities (non-current):

	Decei	mber 31, 2022	Dece	mber 31, 2021
Operating lease liabilities	\$	165,741	\$	134,448
Defined benefit and other post-retirement benefit plans		92,630		138,992
Deferred compensation		82,479		88,681
Unrecognized tax benefits		34,361		79,757
Legal and environmental		30,139		31,304
Deferred revenue		19,879		21,513
Warranty		5,098		5,119
Other		44,576		32,728
Total other liabilities	\$	474,903	\$	532,542

Warranty

Estimated warranty program claims are provided for at the time of sale. Amounts provided for are based on historical costs and adjusted for new claims. The changes in the carrying amount of product warranties were as follows:

	Years Ended December 31,							
	2022			2 2021		2020		
Beginning Balance, December 31 of the Prior Year	\$	48,568	\$	51,088	\$	49,116		
Provision for warranties		60,758		67,212		60,902		
Settlements made		(59,612)		(65,498)		(60,853)		
Other adjustments, including acquisitions and currency translation		(1,265)		(4,234)		1,923		
Ending Balance, December 31	\$	48,449	\$	48,568	\$	51,088		

11. Restructuring Activities

The Company initiated various restructuring programs and incurred severance and other restructuring costs by segment as follows:

	Years Ended December 31,				: 31,	
		2022		2021		2020
Engineered Products	\$	3,194	\$	9,507	\$	10,307
Clean Energy & Fueling		9,571		3,609		6,681
Imaging & Identification		4,702		4,589		5,946
Pumps & Process Solutions		4,685		1,911		13,374
Climate & Sustainability Technologies		6,007		5,068		4,015
Corporate		2,321		2,021		4,145
Total	\$	30,480	\$	26,705	\$	44,468
These amounts are classified in the consolidated statements of earnings as follows:						
Cost of goods and services	\$	6,855	\$	12,895	\$	18,895
Selling, general and administrative expenses		23,625		13,810		25,573
Total	\$	30,480	\$	26,705	\$	44,468

Total restructuring charges of \$30,480 incurred during the year ended December 31, 2022, were primarily a result of restructuring programs initiated in 2021 and 2022 in response to demand conditions and broad-based operational efficiency initiatives focusing on footprint consolidation. Additional programs, beyond the scope of the announced programs may be implemented during 2023 with related restructuring charges.

(Amounts in thousands except share data and where otherwise indicated)

The \$30,480 of restructuring charges incurred during 2022 primarily included the following items:

- The Engineered Products segment recorded \$3,194 of restructuring charges related primarily to headcount reductions.
- The Clean Energy & Fueling segment recorded \$9,571 of restructuring charges primarily due to headcount reductions and exit costs undertaken in light of market conditions. The segment will continue to make proactive adjustments to its cost structure through restructuring and other programs to align with current demand trends.
- The Imaging & Identification segment recorded \$4,702 of restructuring charges related primarily to headcount reductions and exit costs.
- The Pumps & Process Solutions segment recorded \$4,685 of restructuring charges related primarily to headcount reductions.
- The Climate & Sustainability Technologies segment recorded \$6,007 of restructuring charges related primarily to the substantial liquidation of businesses in certain Latin America countries and includes non-cash foreign currency translation losses.
- Corporate recorded \$2,321 of restructuring charges primarily related to exit costs and simplification of organizational structure.

Restructuring expenses incurred in 2021 and 2020 also included headcount reductions, targeted facility consolidations at certain businesses, asset charges related to a product line exit, and actions taken to optimize the Company's cost structure.

The following table details the Company's severance and other restructuring accrual activities:

	Severance	Exit	Total
Balance at January 1, 2020	\$ 13,751	\$ 2,639	\$ 16,390
Restructuring charges	25,716	18,752	44,468
Payments	(29,768)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(35,803)
Other, including foreign currency translation	848	$(10,990)^{(1)}$	(10,142)
Balance at December 31, 2020	10,547	4,366	14,913
Restructuring charges	11,561	15,144	26,705
Payments	(10,951)	(6,171)	(17,122)
Other, including foreign currency translation	(427)	$(10,272)^{(1)}$	(10,699)
Balance at December 31, 2021	10,730	3,067	13,797
Restructuring charges	15,388	15,092 ⁽²⁾	30,480
Payments	(13,975)	(8,159)	(22,134)
Other, including foreign currency translation	(136)	$(7,497)^{(2)}$	(7,633)
Balance at December 31, 2022	\$ 12,007	\$ 2,503	\$ 14,510

⁽¹⁾ Other activity in exit reserves primarily represents the non-cash write-off of certain long-lived assets and inventory in connection with certain facility closures and product exits.

The restructuring accrual balances at December 31, 2022 primarily reflect restructuring plans initiated during the year.

⁽²⁾ Other activity in exit reserves includes non-cash foreign currency translation losses recorded as restructuring charges due to the substantial liquidation of businesses in certain Latin America countries.

(Amounts in thousands except share data and where otherwise indicated)

12. Borrowings

Borrowings consist of the following:

	December	r 31, 2022	Decem	ber 31, 2021
Short-term:				
Commercial paper	\$	734,936	\$	105,000
Other		836		702
Short-term borrowings	\$	735,772	\$	105,702

During the year ended December 31, 2022, commercial paper borrowings increased \$629,936. The borrowings outstanding under the commercial paper program had a weighted average annual interest rate of 2.29% and 0.38% as of December 31, 2022 and December 31, 2021, respectively.

				Carrying	amo	ount (1)
	Principal		December 31, 2022		De	cember 31, 2021
Long-term:						
3.15% 10-year notes due November 15, 2025	\$	400,000	\$	398,063	\$	397,389
1.25% 10-year notes due November 9, 2026 (euro-denominated)	€	600,000		631,522		674,217
0.750% 8-year notes due November 4, 2027 (euro denominated)	€	500,000		525,654		561,293
6.65% 30-year debentures due June 1, 2028	\$	200,000		199,456		199,356
2.950% 10-year notes due November 4, 2029	\$	300,000		297,408		297,029
5.375% 30-year debentures due October 15, 2035	\$	300,000		296,808		296,559
6.60% 30-year notes due March 15, 2038	\$	250,000		248,279		248,166
5.375% 30-year notes due March 1, 2041	\$	350,000		344,982		344,705
Other				341		
Total long-term debt			\$	2,942,513	\$	3,018,714
					_	

⁽¹⁾ Carrying amount is net of unamortized debt discount and deferred debt issuance costs. Total unamortized debt discounts were \$12.7 million and \$15.1 million as of December 31, 2022 and 2021, respectively. Total deferred debt issuance costs were \$10.7 million and \$12.5 million as of December 31, 2022 and 2021, respectively.

The discounts are being amortized to interest expense using the effective interest method over the life of the issuances. The deferred issuance costs are amortized on a straight-line basis over the life of the debt, as this approximates the effective interest method.

As of December 31, 2022, the Company maintained a \$1 billion five-year unsecured revolving credit facility (the "Credit Agreement") with a syndicate of banks, which expires on October 4, 2024. The Company uses the Credit Agreement principally as liquidity back-up for Dover's commercial paper program and for general corporate purposes. At the Company's election, loans under the Credit Agreement will bear interest at a base rate plus an applicable margin. The Credit Agreement requires the Company to pay a facility fee and imposes various restrictions on the Company such as, among other things, a requirement to maintain a minimum interest coverage ratio of consolidated EBITDA to consolidated net interest expense of not less than 3.0 to 1. As of December 31, 2022, there were no outstanding borrowings under the Credit Agreement.

The Company was in compliance with all covenants in the Credit Agreement and other long-term debt covenants at December 31, 2022 and had an interest coverage ratio of consolidated EBITDA to consolidated net interest expense of 15.3 to 1.

(Amounts in thousands except share data and where otherwise indicated)

As of December 31, 2022, the future maturities of long-term debt were as follows:

	Futui	re Maturities
2024	\$	118
2025		400,103
2026		635,915
2027		529,829
2028 and thereafter		1,400,000
Total	\$	2,965,965

Letters of Credit and other Guarantees

As of December 31, 2022, the Company had approximately \$180.3 million outstanding in letters of credit, surety bonds, and performance and other guarantees with financial institutions, which primarily expire on various dates through 2029. These letters of credit and bonds are primarily issued as security for insurance, warranty and other performance obligations. In general, the Company would only be liable for the amount of these guarantees in the event of default in the performance of its obligations, the probability of which is believed to be remote.

13. Financial Instruments

Derivatives

The Company is exposed to market risk for changes in foreign currency exchange rates due to the global nature of its operations and certain commodity risks. In order to manage these risks, the Company has hedged portions of its forecasted sales and purchases, which occur within the next twelve months that are denominated in non-functional currencies, with currency forward contracts designated as cash flow hedges. At December 31, 2022 and 2021, the Company had contracts with U.S. dollar equivalent notional amounts of \$184,565 and \$180,929, respectively, to exchange foreign currencies, principally the euro, pound sterling, Swedish krona, Canadian dollar, Chinese yuan, and Swiss franc. The Company believes it is probable that all forecasted cash flow transactions will occur.

In addition, the Company had outstanding contracts at December 31, 2022 and 2021 with a total notional amount of \$102,509 and \$108,736, respectively, that are not designated as hedging instruments. These instruments are used to reduce the Company's exposure to operating receivables and payables that are denominated in non-functional currencies. Gains and losses on these contracts are recorded in other income, net in the consolidated statements of earnings.

The following table sets forth the fair values of derivative instruments held by the Company as of December 31, 2022 and 2021 and the balance sheet lines in which they are recorded:

	ŀ	Fair Value Ass	set (Li	iability)	
		2022		2021	Balance Sheet Caption
Foreign currency forward	\$	944	\$	2,825	Prepaid and other current assets
Foreign currency forward		(2,760)		(433)	Other accrued expenses

For a cash flow hedge, the change in estimated fair value of a hedging instrument is recorded in accumulated other comprehensive earnings (loss), net of tax as a separate component of the consolidated statements of stockholders' equity and is reclassified into revenues and cost of goods and services in the consolidated statements of earnings during the period in which the hedged transaction is recognized. The amount of gains or losses from hedging activity recorded in earnings is not significant and the amount of unrealized gains and losses from cash flow hedges that are expected to be reclassified to earnings in the next twelve months, is not significant; therefore, additional tabular disclosures are not presented. There are no amounts excluded from the assessment of hedge effectiveness, and the Company's derivative instruments that are subject to credit risk contingent features were not significant.

The Company is exposed to credit loss in the event of nonperformance by counterparties to the financial instrument contracts held by the Company; however, nonperformance by these counterparties is considered unlikely as the Company's policy is to contract with highly-rated, diversified counterparties.

(Amounts in thousands except share data and where otherwise indicated)

The Company has designated the €600,000 and €500,000 of euro-denominated notes issued November 9, 2016 and November 4, 2019, respectively, as hedges of its net investment in euro-denominated operations. Changes in the value of the euro-denominated debt are recognized in foreign currency translation adjustments within other comprehensive earnings (loss) of the consolidated statements of comprehensive earnings to offset changes in the value of the net investment in euro-denominated operations. Changes in the value of the euro-denominated debt resulting from exchange rate differences are offset by changes in the net investment due to the high degree of effectiveness between the hedging instruments and the exposure being hedged.

Amounts recognized in other comprehensive earnings (loss) for the gains (losses) on net investment hedges were as follows:

	2022	2021	2020
Gain (loss) on euro-denominated debt	\$ 80,301	\$ 94,003	\$ (119,298)
Tax (expense) benefit	(17,824)	(20,976)	26,957
Net gain (loss) on net investment hedges, net of tax	\$ 62,477	\$ 73,027	\$ (92,341)

Fair Value Measurements

ASC 820, Fair Value Measurements and Disclosures, establishes a fair value hierarchy that requires the Company to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the hierarchy is based on the lowest level of input that is significant to the fair value measurement. ASC 820 establishes three levels of inputs that may be used to measure fair value as follows:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs include inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in active markets for similar assets and liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of assets or liabilities.

Level 3 inputs are unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 and 2021 were as follows:

	Deceml	ber 31, 2022	December 31, 2021 Level 2		
	L	evel 2			
Assets:					
Foreign currency cash flow hedges	\$	944	\$	2,825	
Liabilities:					
Foreign currency cash flow hedges		2,760		433	

The derivative contracts are measured at fair value using models based on observable market inputs such as foreign currency exchange rates and interest rates; therefore, they are classified within Level 2 of the fair value hierarchy.

In addition to fair value disclosure requirements related to financial instruments carried at fair value, accounting standards require disclosures regarding the fair value of all of the Company's financial instruments.

The estimated fair value of long-term debt at December 31, 2022 and 2021 was \$2,786,862 and \$3,440,501, respectively. The estimated fair value of long-term debt is based on quoted market prices for similar instruments and is, therefore, classified as Level 2 within the fair value hierarchy.

The carrying values of cash equivalents, trade receivables, accounts payable and short-term borrowings are reasonable estimates of their fair values as of December 31, 2022 and 2021 due to the short-term nature of these instruments.

(Amounts in thousands except share data and where otherwise indicated)

14. Income Taxes

Income taxes have been based on the following components of earnings before provision for income taxes in the consolidated statements of earnings:

	Years	Years Ended December 31,					
	2022	2021	2020				
Domestic	\$ 731,796	\$ 835,773	\$ 464,145				
Foreign	555,709	565,053	377,589				
Total	\$ 1,287,505	\$ 1,400,826	\$ 841,734				

Income tax expense (benefit) for the years ended December 31, 2022, 2021 and 2020 is comprised of the following:

	Years Ended December 31,					
	 2022		2021		2020	
Current:						
U.S. federal	\$ 106,768	\$	150,990	\$	79,305	
State and local	1,450		28,106		13,312	
Foreign	140,696		154,147		97,106	
Total current	 248,914		333,243		189,723	
Deferred:						
U.S. federal	(4,760)		(14,143)		2,777	
State and local	303		3,165		(10,526)	
Foreign	(22,328)		(45,257)		(23,691)	
Total deferred	(26,785)		(56,235)		(31,440)	
Total expense	\$ 222,129	\$	277,008	\$	158,283	

(Amounts in thousands except share data and where otherwise indicated)

Differences between the effective income tax rate and the U.S. federal income statutory tax rate are as follows:

	Years E	Years Ended December 31,					
	2022	2021	2020				
U.S. federal income tax rate	21.0 %	21.0 %	21.0 %				
State and local taxes, net of federal income tax benefit	1.6	1.8	1.7				
Foreign operations tax effect	0.1	(0.2)	(0.8)				
Foreign-derived intangible income	(1.3)	(0.8)	(1.1)				
Share awards	(0.2)	(0.8)	(1.2)				
Dispositions		0.3					
Audit resolutions	(3.2)	(1.4)	(0.9)				
Other	(0.7)	(0.1)	0.1				
Effective tax rate	17.3 %	19.8 %	18.8 %				

The tax effects of temporary differences that give rise to deferred tax assets and liabilities are as follows:

	Decen	nber 31, 2022	Decer	nber 31, 2021
Deferred Tax Assets:				_
Accrued compensation, postretirement and other employee benefits	\$	46,008	\$	61,388
Accrued expenses		20,608		30,143
Net operating loss and other carryforwards		317,186		334,483
Inventories		30,569		28,698
Allowance for credit losses		9,224		9,988
Accrued insurance		3,978		4,708
Long-term liabilities, warranty and environmental costs		2,851		3,043
Lease obligations		47,887		41,653
Capitalized research and development		26,548		_
Total gross deferred tax assets		504,859		514,104
Valuation allowance		(271,203)		(306,066)
Total deferred tax assets, net of valuation allowances	\$	233,656	\$	208,038
Deferred Tax Liabilities:				
Intangible assets	\$	(417,809)	\$	(392,208)
Property, plant and equipment		(82,658)		(77,918)
Lease right-of-use assets		(45,202)		(40,181)
Other liabilities		(27,447)		(28,786)
Total gross deferred tax liabilities		(573,116)		(539,093)
Net deferred tax liability	\$	(339,460)	\$	(331,055)
Classified as follows in the Consolidated Balance Sheets:				
Other assets and deferred charges	\$	35,690	\$	33,062
Deferred income taxes		(375,150)		(364,117)
	\$	(339,460)	\$	(331,055)

As of December 31, 2022, the Company has \$263,260 of deferred tax assets recorded related to non-U.S. tax loss carryforwards primarily resulting from non-operating activities. The non-U.S. losses as of December 31, 2022 are available to be carried forward, with \$59,366 of these losses expiring during the years 2023 through 2042, and the remaining \$203,894 carried forward indefinitely.

As of December 31, 2022, the Company has \$53,617 of deferred tax assets recorded related to U.S. federal and state tax loss and tax credit carryforwards. The U.S. federal and state tax losses and credits as of December 31, 2022 are available to be carried forward, with \$46,186 expiring during the years 2023 through 2042, and the remaining \$7,431 carried forward indefinitely.

(Amounts in thousands except share data and where otherwise indicated)

The Company maintains valuation allowances by jurisdiction against the deferred tax assets related to certain of these carryforwards for which it is more likely than not that some portion or all will not be realized.

Unrecognized Tax Benefits

The Company files U.S federal, state, local and non-U.S. tax returns. The Company is routinely audited by the tax authorities in these jurisdictions, and a number of audits are currently underway. It is reasonably possible during the next twelve months that uncertain tax positions may be settled, which could result in a decrease in the gross amount of unrecognized tax benefits. This decrease may result in an income tax benefit. Due to the potential for resolution of U.S federal, state and non-U.S. examinations, and the expiration of various statutes of limitation, the Company's gross unrecognized tax benefits balance may change within the next twelve months by a range of zero to \$5,113. All significant U.S. federal, state, local and non-U.S. matters have been concluded through 2018. The Company believes adequate provision has been made for all income tax uncertainties.

The following table is a reconciliation of the beginning and ending balances of the Company's unrecognized tax benefits:

	Total
Unrecognized tax benefits at January 1, 2020	\$ 83,214
Additions based on tax positions related to the current year	3,134
Additions for tax positions of prior years	5,490
Reductions for tax positions of prior years	(3,599)
Cash settlements	(6,214)
Lapse of statutes	(9,687)
Unrecognized tax benefits at December 31, 2020 (1)	72,338
Additions based on tax positions related to the current year	 5,859
Additions for tax positions of prior years	3,784
Reductions for tax positions of prior years	(13,008)
Cash settlements	(1,490)
Lapse of statutes	(2,831)
Unrecognized tax benefits at December 31, 2021 (1)	64,652
Additions based on tax positions related to the current year	 3,315
Additions for tax positions of prior years	3,421
Reductions for tax positions of prior years	(39,439)
Cash settlements	(411)
Lapse of statutes	(3,352)
Unrecognized tax benefits at December 31, 2022 (1)	\$ 28,186

⁽¹⁾ If recognized, the net amount of potential tax benefits as of December 31, 2022 that would impact the Company's effective tax rate is \$23,496. During the years ended December 31, 2022, 2021 and 2020, the Company recorded income of \$8,931, \$2,654 and \$78, respectively, as a component of provision for income taxes related to the accrued interest and penalties on net reductions to unrecognized tax benefits. The Company had accrued interest and penalties of \$6,175 at December 31, 2022 and \$15,107 at December 31, 2021, which are not included in the above table.

(Amounts in thousands except share data and where otherwise indicated)

15. Equity and Cash Incentive Program

The Company's share-based awards are typically granted annually at its regularly scheduled first quarter Compensation Committee meeting. For the years presented herein, employee awards were made pursuant to the terms of the Company's 2021 Omnibus Incentive Plan (the "2021 Plan") and 2012 Equity and Cash Incentive Plan (the "2012 Plan").

On May 7, 2021, the shareholders approved the 2021 Plan, to replace the 2012 Plan, which otherwise would have terminated according to its terms on May 3, 2022. Upon approval of the 2021 Plan, no additional awards could be granted under the 2012 Plan, and the remaining 4,888,197 shares available for additional award grant purposes became available for issuance under the 2021 Plan. The 2021 Plan provides for stock options and SARs, RSUs, PSAs, cash performance awards, directors' shares and deferred stock units. Under the 2021 Plan, a total of 8,300,000 newly authorized shares of common stock are reserved for issuance, resulting in a total of 13,188,197 authorized shares available for issuance. These shares are subject to adjustments resulting from stock dividends, stock splits, recapitalizations, reorganizations and other similar changes.

Officers and other key employees, as well as non-employee directors, are eligible to participate in the 2021 Plan, and were also eligible under the 2012 Plan which had a ten-year term between May 3, 2012 to May 3, 2022.

Stock-based compensation costs are reported within selling, general and administrative expenses in the consolidated statements of earnings. The following table summarizes the Company's compensation expense relating to all stock-based incentive plans:

	Years Ended December 31,					
		2022		2021		2020
Pre-tax stock-based compensation expense	\$	30,821	\$	31,111	\$	25,026
Tax benefit		(2,993)		(2,859)		(2,731)
Total stock-based compensation expense, net of tax	\$	27,828	\$	28,252	\$	22,295

SARs

The exercise price per share for SARs is equal to the closing price of the Company's stock on the New York Stock Exchange on the date of grant. New common shares are issued when SARs are exercised. The period during which SARs are exercisable is fixed by the Company's Compensation Committee at the time of grant. Generally, the SARs vest after three years of service and expire at the end of ten years.

In 2022, 2021 and 2020, the Company issued SARs covering 335,285, 413,173 and 390,780 shares, respectively. The fair value of each SAR grant was estimated on the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	2022	2021	2020
Risk-free interest rate	1.86 %	0.59 %	1.44 %
Dividend yield	1.25 %	1.62 %	1.65 %
Expected life (years)	5.4	5.5	5.5
Volatility	29.46 %	30.49 %	22.76 %
Grant price	\$160.21	\$122.73	\$119.86
Fair value per share at date of grant	\$42.07	\$29.08	\$22.54

Expected volatilities are based on Dover's stock price history, including implied volatilities from traded options on Dover stock. The Company uses historical data to estimate SAR exercises and employee termination patterns within the valuation model. The expected life of SARs granted is derived from the output of the option valuation model and represents the average period of time that SARs granted are expected to be outstanding. The interest rate for periods within the contractual life of the awards is based on the U.S. Treasury yield curve in effect at the time of grant.

(Amounts in thousands except share data and where otherwise indicated)

A summary of activity relating to SARs granted under the 2021 Plan and the 2012 Plan for the year ended December 31, 2022 is as follows:

	SARs						
	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)				
Outstanding at January 1, 2022	2,377,384	\$ 89.49					
Granted	335,285	160.21					
Forfeited / expired	(76,856)	135.59					
Exercised	(191,271)	76.15					
Outstanding at December 31, 2022	2,444,542	98.70	6.0				
Exercisable at December 31, 2022	1,443,544	\$ 74.87	4.5				

The following table summarizes information about outstanding SARs at December 31, 2022:

		SARs O	utstanding					
Range of Exercise Prices	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Life in Years	Aggregate Intrinsic Value	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Life in Years	Aggregate Intrinsic Value
\$48.28 - \$82.09	1,009,878	\$ 67.86	3.8	\$ 68,217	1,009,878	\$ 67.86	3.8	\$ 68,217
\$84.94 - \$119.86	771,613	\$ 103.70	6.6	24,469	433,666	\$ 91.20	6.1	19,172
\$122.73 - \$160.21	663,051	\$ 139.87	8.6	4,515	_	\$ —	0	_
	2,444,542			\$ 97,201	1,443,544			\$ 87,389

Unrecognized compensation expense related to SARs not yet exercisable was \$9,855 at December 31, 2022. This cost is expected to be recognized over a weighted average period of 1.8 years.

Other information regarding the exercise of SARs is listed below:

		2022	2021	2020	
Fair value of SARs that	became exercisable	\$ 8,939	\$ 10,199	\$ 8,585	
Aggregate intrinsic value	ue of SARs exercised	\$ 11,992	\$ 62,895	\$ 55,031	

PSAs

PSAs granted are expensed over the three-year requisite performance and service period. Awards become vested if (1) the Company achieves certain market conditions and (2) the employee remains continuously employed by the Company during the performance period. Partial vesting may occur after separation from service in the case of certain terminations not for cause and for retirements.

(Amounts in thousands except share data and where otherwise indicated)

In 2022, 2021 and 2020, the Company issued performance shares covering 40,087, 50,371 and 49,056 shares, respectively.

The PSAs granted in 2022, 2021 and 2020 are market condition awards as attainment is based on Dover's performance relative to its peer group (companies listed under the S&P 500 Industrials sector) for the relevant performance period. The performance period and vesting period for these awards is approximately three years. These awards were valued on the date of grant using the Monte Carlo simulation model (a binomial lattice-based valuation model), and are generally recognized ratably over the vesting period. The fair value is not subject to change based on future market conditions. The assumptions used in determining the fair value of the performance shares granted in 2022, 2021 and 2020 were as follows:

	2022	2021	2020
Risk-free interest rate	1.68 %	0.19 %	1.40 %
Dividend yield	1.25 %	1.62 %	1.65 %
Expected life (years)	2.9	2.9	2.9
Volatility	31.10 %	31.90 %	23.30 %
Grant price	\$160.21	\$122.73	\$119.86
Fair value per share at date of grant	\$196.40	\$148.29	\$165.71

A summary of activity for PSAs for the year ended December 31, 2022 is as follows:

	Number of Shares	Avera Grant-I Fair Va	ige Date
Unvested at January 1, 2022	96,129	\$ 156	6.88
Granted	40,087	196	6.40
Forfeited	(4,690)	167	7.93
Vested	(45,719)	165	5.71
Unvested at December 31, 2022	85,807	\$ 170	0.03

Waightad

Unrecognized compensation expense related to unvested performance shares as of December 31, 2022 was \$7,702, which will be recognized over a weighted average period of 1.7 years.

RSUs

The Company also has restricted stock authorized for grant. Common stock of the Company may be granted at no cost to certain officers and key employees. In general, restrictions limit the sale or transfer of these shares during a three-year period, and restrictions lapse proportionately over the three-year period. The Company granted 79,556, 87,177 and 83,512 of RSUs in 2022, 2021 and 2020, respectively. The fair value of these awards was determined using Dover's closing stock price on the date of grant, which was \$160.21, \$122.73, and \$119.86 in 2022, 2021 and 2020, respectively.

(Amounts in thousands except share data and where otherwise indicated)

A summary of activity for RSUs for the year ended December 31, 2022 is as follows:

	Number of Shares	Weigh Avera Grant-I Fair Va	ige Date
Unvested at January 1, 2022	202,682	\$ 10	7.03
Granted	79,556	166	0.21
Forfeited	(14,920)	130	6.85
Vested	(119,642)	10	1.41
Unvested at December 31, 2022	147,676	\$ 13:	5.98

Unrecognized compensation expense relating to unvested RSUs as of December 31, 2022 was \$9,762, which will be recognized over a weighted average period of 1.4 years.

Directors' Shares

The Company issued the following shares to its non-employee directors as partial compensation for serving as directors of the Company:

	Years	Years ended December 31,				
	2022	2021	2020			
Aggregate shares granted	10,730	7,917	9,854			
Deferred stock units	(7,247)	(5,322)	(6,278)			
Net shares issued	3,483	2,595	3,576			

16. Commitments and Contingent Liabilities

Guarantees

The Company has provided typical indemnities in connection with sales of certain businesses and assets, including representations and warranties and related indemnities for environmental, health and safety, tax and employment matters. The Company does not have any material liabilities recorded for these indemnifications and is not aware of any claims or other information that would give rise to material payments under such indemnities.

Litigation

A few of the Company's subsidiaries are involved in legal proceedings relating to the cleanup of waste disposal sites identified under federal and state statutes which provide for the allocation of such costs among "potentially responsible parties." In each instance, the extent of the Company's liability appears to be relatively insignificant in relation to the total projected expenditures and the number of other "potentially responsible parties" involved and is anticipated to be immaterial to the Company. In addition, a few of the Company's subsidiaries are involved in ongoing remedial activities at certain current and former plant sites, in cooperation with regulatory agencies, and appropriate estimated liabilities have been established. See Note 10 — Other Accrued Expenses and Other Liabilities for additional details.

The Company and some of its subsidiaries are also parties to a number of other legal proceedings incidental to their businesses. These proceedings primarily involve claims by private parties alleging injury arising out of use of the Company's products, patent infringement, employment matters and commercial disputes. Management and legal counsel, at least quarterly, review the probable outcome of such proceedings, the costs and expenses reasonably expected to be incurred and currently accrued to-date and consider the availability and extent of insurance coverage. The Company has estimated liabilities for these other legal matters that are probable and estimable, and at December 31, 2022 and 2021, these liabilities were immaterial. While it is not possible at this time to predict the outcome of these legal actions, in the opinion of management, based on the aforementioned reviews, the Company is not currently involved in any legal proceedings which, individually or in the aggregate, could have a material effect on its financial position, results of operations, or cash flows.

(Amounts in thousands except share data and where otherwise indicated)

17. Employee Benefit Plans

The Company offers defined contribution retirement plans which cover the majority of its U.S. employees, as well as employees in certain other countries. The Company's expense relating to defined contribution plans was \$57,543, \$59,719 and \$52,629 for the years ended December 31, 2022, 2021 and 2020, respectively.

The Company sponsors qualified defined benefit pension plans covering certain employees of the Company and its subsidiaries. The plans' benefits are generally based on years of service and employee compensation. The Company also provides to certain management employees, through non-qualified plans, supplemental retirement benefits in excess of qualified plan limits imposed by federal tax law.

In July 2013, the Company announced that, after December 31, 2013, the U.S. qualified and non-qualified defined benefit plans would be closed to new employees. All pension-eligible employees as of December 31, 2013 will continue to earn a pension benefit through December 31, 2023 as long as they remain employed by the Company participating in the impacted plans. The Company also announced that effective January 1, 2024, the plans would be frozen to any future benefit accruals.

The Company also maintains other post-retirement benefit plans. These plans are closed to new entrants and are not considered to be significant. The supplemental and other post-retirement benefit plans are supported by the general assets of the Company.

(Amounts in thousands except share data and where otherwise indicated)

Obligations and Funded Status

The following tables summarize the change in benefit obligations, change in plan assets, and funded status associated with the Company's significant defined benefit plans and the amounts recognized in the consolidated balance sheets at December 31, 2022 and 2021:

	Qualified Defined Benefits					Non-Qualified						
		U.S.	Pla	n	Non-U.S. Plans			Supplement				
		2022		2021	2022		2021		2022		2021	
Change in benefit obligation:												
Benefit obligation at beginning of year	\$	478,346	\$	524,181	\$ 314,715	\$	340,829	\$	42,905	\$	51,194	
Service cost		5,703		7,134	4,675		5,749		1,426		1,561	
Interest cost		13,745		13,605	5,220		3,590		1,215		1,232	
Plan participants' contributions		_		_	2,186		2,009		_		_	
Benefits paid		(17,680)		(18,221)	(9,756)		(7,519)		(3,831)		(5,331)	
Actuarial gains ⁽¹⁾		(126,985)		(19,393)	(72,977)		(20,766)		(9,596)		(4,568)	
Amendments		_		_	(2,291)		1,828		384		_	
Settlements and curtailments		(33,228)		(28,960)	(8,849)		(3,517)		_		(1,183)	
Currency translation and other					(17,606)		(7,488)				_	
Benefit obligation at end of year		319,901		478,346	215,317		314,715		32,503		42,905	
Change in plan assets:												
Fair value of plan assets at beginning of year		573,100		606,896	219,677		212,748		_		_	
Actual return on plan assets		(125,011)		13,385	(48,147)		10,664		_		_	
Company contributions		_		_	9,059		8,121		3,831		6,262	
Plan participants' contributions		_		_	2,186		2,009		_		_	
Benefits paid		(17,680)		(18,221)	(9,756)		(7,519)		(3,831)		(5,331)	
Settlements and curtailments		(36,356)		(28,960)	(8,640)		(2,287)		_		(931)	
Currency translation and other		_		_	(11,519)		(4,059)		_		_	
Fair value of plan assets at end of year		394,053		573,100	152,860		219,677		_			
Funded (Unfunded) status	\$	74,152	\$	94,754	\$ (62,457)	\$	(95,038)	\$	(32,503)	\$	(42,905)	
Amounts recognized in the consolidated balance sheets consist of:												
Assets and Liabilities:												
Other assets and deferred charges	\$	74,152	\$	94,754	\$ 1,863	\$	1,575	\$	_	\$	_	
Accrued compensation and employee benefits		_		_	(1,774)		(1,729)		(7,243)		(4,776)	
Other liabilities (deferred compensation)		_		_	(62,546)		(94,884)		(25,260)		(38,129)	
Total assets (liabilities)		74,152		94,754	(62,457)		(95,038)		(32,503)		(42,905)	
Accumulated Other Comprehensive Loss (Earnings):												
Net actuarial losses (gains)		55,227		33,545	31,607		50,878		(28,304)		(20,724)	
Prior service cost (credit)		_		110	(3,006)		(1,303)		1,874		2,980	
Tax (benefit) expense		(11,474)		(6,686)	(6,434)		(11,836)		5,768		3,840	
Total accumulated other comprehensive loss (earnings), net of tax		43,753		26,969	22,167		37,739		(20,662)		(13,904)	
Net amount recognized at December 31,	\$	117,905	\$	121,723	\$ (40,290)	\$	(57,299)	\$	(53,165)	\$	(56,809)	
Accumulated benefit obligations	\$	318,275	\$	471,871	\$ 210,259	\$	302,929	\$	31,523	\$	41,110	

⁽¹⁾ The actuarial gains were primarily due to discount rate fluctuations.

The Company's net unfunded status at December 31, 2022 and 2021 includes net liabilities of \$62,457 and \$95,038, respectively, relating to the Company's significant international qualified plans, some in locations where it is not economically advantageous to pre-fund the plans due to local regulations. The majority of the international obligations relate to defined pension plans operated by the Company's businesses in Germany, France, the United Kingdom, and Italy.

(Amounts in thousands except share data and where otherwise indicated)

The accumulated benefit obligation for all defined benefit pension plans was \$560,057 and \$815,910 at December 31, 2022 and 2021, respectively.

Non-U.S. pension plans with accumulated benefit obligations in excess of plan assets consist of the following at December 31, 2022 and 2021:

	2022	2021
Accumulated benefit obligation	\$ 124,082	\$ 193,710
Fair value of plan assets	64,112	106,519

Non-U.S. pension plans with projected benefit obligations in excess of plan assets consist of the following at December 31, 2022 and 2021:

	2022	2021
Projected benefit obligation	\$ 200,671	\$ 292,701
Fair value of plan assets	136,351	196,088

The Company has adjusted the prior year amounts for projected benefit obligations in excess of plan assets in the table above.

Net Periodic Benefit Cost

The operating expense component of net periodic benefit cost (service cost) is reported with similar compensation costs in the Company's consolidated statement of earnings. The non-operating components (all other components of net periodic benefit expense, including interest cost, amortization of prior service cost, curtailments and settlements, etc.) are reported outside of operating income in other income, net in the consolidated statement of earnings.

Components of the net periodic benefit cost were as follows:

Defined Benefit Plans

		Qı	ualified Defi	ned Benefit	S	N	ied		
	U.S. Plan			Non-U.S. Plans				emental Bo	
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Service cost	\$ 5,703	\$ 7,134	\$ 6,824	\$4,675	\$ 5,749	\$ 5,345	\$ 1,426	\$ 1,561	\$ 1,272
Interest cost	13,745	13,605	16,272	5,220	3,590	3,697	1,215	1,232	1,765
Expected return on plan assets	(29,104)	(28,980)	(31,475)	(7,191)	(7,188)	(6,837)	_	_	_
Amortization of:									
Prior service cost (credit)	110	212	227	(526)	(453)	(493)	1,490	1,531	1,695
Recognized actuarial loss (gain)	2,300	10,012	7,536	1,747	3,938	3,047	(2,016)	(1,672)	(1,857)
Settlement and curtailment loss (gain)	6,276	2,031		(393)	194	25		(743)	
Net periodic (benefit) expense	\$ (970)	\$ 4,014	\$ (616)	\$ 3,532	\$ 5,830	\$ 4,784	\$ 2,115	\$ 1,909	\$ 2,875

Assumptions

The Company determines actuarial assumptions on an annual basis. The weighted average assumptions used in determining the benefit obligations were as follows:

	Q	ualified Defi	ned Benefits		Non-Qualified Supplemental		
	U.S. I	Qualified Define U.S. Plan 2022 2021 5.55 % 2.95 % 4.00 % 4.00 %			Supplen Bene		
	2022	2021	2022	2021	2022	2021	
Discount rate	5.55 %	2.95 %	3.57 %	1.18 %	5.50 %	2.90 %	
Average wage increase	4.00 %	4.00 %	1.70 %	1.53 %	4.50 %	4.50 %	

(Amounts in thousands except share data and where otherwise indicated)

The weighted average assumptions used in determining the net periodic benefit cost were as follows:

		Qı	ıalified De	fined Benefi	its		No	n- Qualifie	·d
	Ţ	J.S. Plan		No	n-U.S. Pla	ns		mental Be	
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Discount rate	2.95 %	2.65 %	3.40 %	1.18 %	0.79 %	1.18 %	2.90 %	2.45 %	3.20 %
Average wage increase	4.00 %	4.00 %	4.00 %	1.53 %	1.51 %	1.80 %	4.50 %	4.50 %	4.50 %
Expected return on plan assets	5.60 %	5.60 %	6.30 %	3.47 %	3.40 %	3.69 %	na	na	na

The Company's discount rate assumption is determined by developing a yield curve based on high quality corporate bonds with maturities matching the plans' expected benefit payment streams. The plans' expected cash flows are then discounted by the resulting year-by-year spot rates.

Plan Assets

The primary financial objective of the plans is to secure participant retirement benefits. Accordingly, the key objective in the plans' financial management is to promote stability and, to the extent appropriate, growth in the funded status. Related and supporting financial objectives are established in conjunction with a review of current and projected plan financial requirements.

As it relates to the funded defined benefit pension plans, the Company's funding policy is consistent with the funding requirements of the Employment Retirement Income Security Act ("ERISA") and applicable international laws. The Company is responsible for overseeing the management of the investments of the plans' assets and otherwise ensuring that the plans' investment programs are in compliance with ERISA, other relevant legislation and the related plan documents. Where relevant, the Company has retained professional investment managers to manage the plans' assets and implement the investment process. The investment managers, in implementing their investment processes, have the authority and responsibility to select appropriate investments in the asset classes specified by the terms of their applicable prospectus or investment manager agreements with the plans.

The assets of the plans are invested to achieve an appropriate return for the plans consistent with a prudent level of risk. The plans' long-term investment objective is to generate investment returns that provide adequate assets to meet all benefit obligations in accordance with applicable regulations. The expected return on assets assumption used for net periodic benefit cost is developed through analysis of historical and forecasted market returns, statistical analysis, current market conditions and the past experience of plan asset investments.

The Company's actual and target weighted average asset allocation for our U.S. Qualified Defined Benefits Plan was as follows:

	2022	2021	Current Target
Return-seeking investments	27 %	29 %	30 %
Liability hedging investments	73 %	69 %	70 %
Other	<u> </u>	2 %	<u> </u>
Total	100 %	100 %	100 %

Return-seeking investments include diversified foreign and domestic equities, U.S. high yield fixed income investments, and emerging market debt. Liability hedging investments primarily include a diversified portfolio of U.S. long duration fixed income assets. While the non-U.S. investment policies are different for each country, the long-term objectives are generally the same as for the U.S. pension assets.

(Amounts in thousands except share data and where otherwise indicated)

The fair values of both U.S. and non-U.S. pension plan assets by asset category within the fair value hierarchy (as defined in Note 13 — Financial Instruments) were as follows:

		U.S. Qualified Defined Benefits Plan							
				12/31/2022	2			12/31/2021	
		Le	evel 1	Level 2	Т	otal Fair Value	Level 1	Level 2	Total Fair Value
Corporate bonds		\$		\$ 201,203	\$	201,203	\$ —	\$ 316,367	\$ 316,367
Government securities			_	56,978	;	56,978	_	73,115	73,115
Interest-bearing cash and short-term	m investme	nts	2,900		-	2,900	3,227		3,227
Total investments at fair value			2,900	258,181		261,081	3,227	389,482	392,709
Investments measured at net asset	value*								
Collective funds			_	_		106,273	_	_	167,551
Short-term investment funds			_	_		26,699	_	_	12,840
Total investments		\$	2,900	\$ 258,181	\$	394,053	\$ 3,227	\$ 389,482	\$ 573,100
				N	n_II	S. Plans			
				1 11	JII- U	.D. I lalis			
		12/3	1/2022				12/3	21/2021	
		12/3	1/2022				12/3	31/2021	
	Landi			Total 2		T11			Total Fair
Common stocks	Level 1	Level 2	Level	3 Valu	ıe	Level 1	Level 2	Level 3	Value
Common stocks	Level 1 \$ 46,618	Level 2		3 Valu	ie ,618	\$ 58,054	Level 2		Value \$ 58,054
Fixed income investments	\$ 46,618	Level 2	Level	Value Value Va	,618 ,168	\$ 58,054	Level 2	Level 3	Value \$ 58,054 27,034
Fixed income investments Mutual funds	\$ 46,618 ————————————————————————————————————	Level 2	Level	Value Value Va	,618 ,168 ,031	\$ 58,054 — 30,675	Level 2 \$	Level 3	Value \$ 58,054 27,034 30,675
Fixed income investments Mutual funds Cash and cash equivalents	\$ 46,618	Level 2 \$ — 25,168 —	Level \$	3 Valu - \$ 46 - 25 - 20	,618 ,168 ,031 ,909	\$ 58,054	Level 2 \$ — 27,034 —	Level 3 \$ — — — —	Value \$ 58,054 27,034 30,675 3,634
Fixed income investments Mutual funds Cash and cash equivalents Other	\$ 46,618 ————————————————————————————————————	Level 2 \$ — 25,168 — — 996	Level \$ 16,2	3 Valu	,618 ,168 ,031 ,909 ,290	\$ 58,054 — 30,675 3,634 —	Level 2 \$ — 27,034 — 2,877	Level 3 \$ — — — — — 20,252	Value \$ 58,054 27,034 30,675 3,634 23,129
Fixed income investments Mutual funds Cash and cash equivalents Other Total investments at fair value	\$ 46,618 	Level 2 \$ — 25,168 —	Level \$	3 Valu	,618 ,168 ,031 ,909	\$ 58,054 — 30,675	Level 2 \$ — 27,034 —	Level 3 \$ — — — —	Value \$ 58,054 27,034 30,675 3,634
Fixed income investments Mutual funds Cash and cash equivalents Other Total investments at fair value Investments measured at net asset	\$ 46,618 	Level 2 \$ — 25,168 — — 996	Level \$ 16,2	3 Valu	,618 ,168 ,031 ,909 ,290 ,016	\$ 58,054 — 30,675 3,634 —	Level 2 \$ — 27,034 — 2,877	Level 3 \$ — — — — — 20,252	Value \$ 58,054 27,034 30,675 3,634 23,129 142,526
Fixed income investments Mutual funds Cash and cash equivalents Other Total investments at fair value Investments measured at net asset Collective funds	\$ 46,618 	Level 2 \$ — 25,168 — — 996	Level \$ 16,2	3 Valu - \$ 46 - 25 - 20 - 94 17 94 39	,618 ,168 ,031 ,909 ,290 ,016	\$ 58,054 — 30,675 3,634 —	Level 2 \$ — 27,034 — 2,877	Level 3 \$ — — — — — 20,252	Value \$ 58,054 27,034 30,675 3,634 23,129 142,526 72,235
Fixed income investments Mutual funds Cash and cash equivalents Other Total investments at fair value Investments measured at net asset	\$ 46,618 	Level 2 \$ — 25,168 — — 996	Level \$ 16,2	3 Valu - \$ 46 - 25 - 20 - 94 17 94 110 - 39 - 3	,618 ,168 ,031 ,909 ,290 ,016	\$ 58,054 — 30,675 3,634 —	Level 2 \$ 27,034 2,877 29,911 	Level 3 \$ — — — — — 20,252	Value \$ 58,054 27,034 30,675 3,634 23,129 142,526

^{*} In accordance with Fair Value Measurement Topic 820 (Subtopic 820-10), certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient were not classified in the fair value hierarchy. These are included to permit reconciliation of the fair value hierarchy to the aggregate pension plan assets.

Common stocks represent investments in domestic and foreign equities, which are publicly traded on active exchanges and are valued based on quoted market prices.

Fixed income investments include bonds and notes, which are valued based on quoted market prices, as well as investments in other government and municipal securities and corporate bonds, which are valued based on yields currently available on comparable securities of issuers with similar credit ratings.

Mutual funds are categorized as either Level 1, 2 or Net Asset Value ("NAV") as a practical expedient depending on the nature of the observable inputs. Collective funds and short-term investment funds are valued using NAV as a practical expedient as of the last business day of the year. The NAV is based on the underlying value of the assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The availability of observable data is monitored by plan management to assess appropriate classification of financial instruments within the fair value hierarchy. Depending upon the availability of such inputs, specific securities may transfer between levels. In such instances, the transfer is reported at the end of the reporting period.

(Amounts in thousands except share data and where otherwise indicated)

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed during 2021 and 2022, due to the following:

	Level 3
Balance at December 31, 2020	\$ 21,276
Actual return on plan assets:	
Relating to assets still held at December 31, 2021	48
Relating to assets sold during the period	_
Purchases	1,664
Sales and settlements	(2,158)
Foreign currency translation	(578)
Balance at December 31, 2021	20,252
Actual return on plan assets:	
Relating to assets still held at December 31, 2022	(382)
Relating to assets sold during the period	_
Purchases	1,852
Sales and settlements	(4,808)
Foreign currency translation	(620)
Balance at December 31, 2022	\$ 16,294

Future Estimates

Benefit Payments

Estimated future benefit payments to retirees, which reflect expected future service except to the extent frozen, are as follows:

	 Qualified Def	fined Benefits	Non-Qualified
	U.S. Plan	Non-U.S. Plans	Supplemental Benefits
2023	\$ 25,946	\$ 10,677	\$ 7,440
2024	27,511	10,969	5,231
2025	26,121	10,800	2,312
2026	25,567	11,859	4,599
2027	25,307	14,156	1,800
2028 - 2032	122,304	68,857	14,348

Contributions

In 2023, the Company expects to make payments of approximately \$7.1 million to its non-US plans and \$7.4 million to its non-qualified U.S. plan. No payments are expected for the qualified U.S. plan in 2023.

(Amounts in thousands except share data and where otherwise indicated)

18. Accumulated Other Comprehensive Earnings (Loss)

The components of accumulated other comprehensive earnings (loss) are as follows:

	Decemb	ber 31, 2022	December 31, 202	21
Cumulative foreign currency translation adjustments	\$	(220,224)	\$ (107,13	30)
Pension and other postretirement benefit plans		(45,258)	(50,44	18)
Changes in fair value of cash flow hedges and other		(741)	3,52	26
	\$	(266,223)	\$ (154,05	52)

Amounts reclassified from accumulated other comprehensive earnings (loss) to earnings (loss) during the year ended December 31, 2022, 2021 and 2020 were as follows:

	Years Ended December 31,					1,
		2022		2021		2020
Foreign currency translation:						
Reclassification of foreign currency translation losses to earnings	\$	5,915	\$		\$	_
Tax benefit		_		_		_
Net of tax	\$	5,915	\$		\$	_
Pension and other postretirement benefit plans:						
Amortization of actuarial losses	\$	2,965	\$	12,278	\$	8,583
Amortization of prior service costs and transition obligation		1,074		1,304		1,442
Settlement and curtailment		4,282		1,482		25
Total before tax		8,321		15,064		10,050
Tax benefit		(1,842)		(3,423)		(2,184)
Net of tax	\$	6,479	\$	11,641	\$	7,866
Cash flow hedges:						
Net gains reclassified into earnings	\$	(4,797)	\$	(6,271)	\$	(817)
Tax expense		1,065		1,400		185
Net of tax	\$	(3,732)	\$	(4,871)	\$	(632)

The Company recognizes the amortization of net actuarial losses, prior service costs and transition obligation as well as settlements and curtailments, in other income, net in the consolidated statements of earnings.

Cash flow hedges consist mainly of foreign currency forward contracts. The Company recognizes the realized gains and losses on its cash flow hedges in the same line item as the hedged transaction, such as revenue, cost of goods and services, or selling, general and administrative expenses in the consolidated statements of earnings.

(Amounts in thousands except share data and where otherwise indicated)

19. Segment Information

The Company categorizes its operating companies into five reportable segments: Engineered Products, Clean Energy & Fueling, Imaging & Identification, Pumps & Process Solutions, and Climate & Sustainability Technologies. The Company's businesses are structured around similar business models, go-to market strategies, manufacturing practices and product categories which increases management efficiency and better aligns Dover's operations with its strategic initiatives and capital allocation priorities, and provides greater transparency about performance. Operating segments are defined as the components of an enterprise for which separate financial information is available, that engage in business activities from which they may recognize revenues and incur expenses, and that are regularly evaluated by the entity's chief operating decision maker or decision-making group, which is composed of Dover's executive leadership team, in making resource allocation decisions and evaluating performance.

The five reportable segments are as follows:

- Engineered Products segment provides a wide range of equipment, components, software, solutions and services to
 the vehicle aftermarket, waste handling, industrial automation, aerospace and defense, industrial winch and hoist,
 and fluid dispensing end-markets.
- Clean Energy & Fueling segment provides components, equipment, software, solutions and services enabling safe
 and reliable storage, transport and dispensing of traditional and clean fuels (including liquefied natural gas,
 hydrogen, and electric vehicle charging), cryogenic gases, and other hazardous substances along the supply chain,
 and safe and efficient operation of convenience retail, retail fueling and vehicle wash establishments, as well as
 facilities where cryogenic gases are produced, stored or consumed.
- Imaging & Identification segment supplies precision marking and coding, product traceability, brand protection and digital textile printing equipment, as well as related consumables, software and services to the global packaged and consumer goods, pharmaceutical, industrial manufacturing, textile and other end-markets.
- Pumps & Process Solutions segment manufactures specialty pumps and flow meters, highly engineered precision
 components for rotating and reciprocating machines, fluid connecting solutions and plastics and polymer processing
 equipment, serving single-use biopharmaceutical production, diversified industrial manufacturing, chemical
 production, plastics and polymer processing, midstream and downstream oil and gas and other end-markets.
- Climate & Sustainability Technologies segment is a provider of innovative and energy-efficient equipment, components and parts for the commercial refrigeration, equipment and systems, heating and cooling and beverage can-making equipment markets.

The Company's Chief Operating Decision Maker ("CODM") uses segment earnings to evaluate segment performance and allocate resources. Segment earnings is defined as earnings before purchase accounting expenses, restructuring and other costs, loss (gain) on dispositions, corporate expenses/other, interest expense, interest income and provision for income taxes.

During the year ended December 31, 2022, the segment measure of profit and loss used by the CODM was changed to segment earnings from segment earnings (EBIT), defined as earnings before corporate expenses/other, interest expense, interest income and provision for income taxes. This change in segment measure allows the CODM to better assess operating results over time and is consistent with how the CODM evaluates our businesses. Accordingly, we have updated our segment earnings for the years ended 2021 and 2020 to conform to the new presentation.

(Amounts in thousands except share data and where otherwise indicated)

Segment financial information and a reconciliation of segment results to consolidated results follows:

	Years Ended December 31,							
	2022		2021		2020			
Revenue:								
Engineered Products	\$ 2,043,632		1,780,827	\$	1,531,277			
Clean Energy & Fueling	1,878,507		1,648,153		1,476,282			
Imaging & Identification	1,123,815		1,163,367		1,038,178			
Pumps & Process Solutions	1,728,235		1,708,634		1,324,003			
Climate & Sustainability Technologies	1,737,724		1,608,175		1,316,090			
Intersegment eliminations	(3,825)		(2,075)		(2,070)			
Total consolidated revenue	\$ 8,508,088	\$	7,907,081	\$	6,683,760			
Net earnings:								
Segment earnings:								
Engineered Products	\$ 346,519	\$	277,852	\$	265,143			
Clean Energy & Fueling	352,993		327,186		290,233			
Imaging & Identification	268,084		266,932		224,033			
Pumps & Process Solutions	533,018		575,593		348,733			
Climate & Sustainability Technologies	254,484		185,517		126,093			
Total segment earnings	1,755,098		1,633,080		1,254,235			
Purchase accounting expenses (1)	181,103		141,980		138,515			
Restructuring and other costs (2)	38,990		38,436		51,472			
Loss (gain) on dispositions (3)	194		(206,338)		(5,213)			
Corporate expense / other (4)	135,280		156,298		119,361			
Interest expense	116,456		106,319		111,937			
Interest income	(4,430)		(4,441)		(3,571)			
Earnings before provision for income taxes	1,287,505		1,400,826		841,734			
Provision for income taxes	222,129		277,008		158,283			
Net earnings	\$ 1,065,376	<u>\$</u>	1,123,818	\$	683,451			
Segment margins:			, ,	Ė				
Engineered Products	17.0 9	%	15.6 %		17.3 %			
Clean Energy & Fueling	18.8 9	%	19.9 %		19.7 %			
Imaging & Identification	23.9 9	%	22.9 %		21.6 %			
Pumps & Process Solutions	30.8 9	%	33.7 %		26.3 %			
Climate & Sustainability Technologies	14.6	%	11.5 %		9.6 %			
Total segments	20.6 9	%	20.7 %		18.8 %			
Net earnings	12.5 9	%	14.2 %		10.2 %			
Depreciation and amortization:								
Other depreciation and amortization (5):								
Engineered Products	\$ 27,745	\$	27,036	\$	25,242			
Clean Energy & Fueling	28,815		25,842		26,053			
Imaging & Identification	14,185		14,189		13,795			
Pumps & Process Solutions	40,839		39,272		38,667			
Climate & Sustainability Technologies	26,204		26,987		24,582			
Total other depreciation and amortization	137,788		133,326		128,339			
Corporate depreciation and amortization	8,137		7,250		6,535			
Depreciation and amortization included in purchase accounting expense			.,		2,222			
Depreciation and amortization included in purchase accounting expense								
and restructuring and other	161,613		149,547		144,177			

⁽¹⁾ Purchase accounting expenses are primarily comprised of amortization of intangible assets and charges related to fair value step-ups for acquired inventory sold during the period.
(2) Restructuring and other costs relate to actions taken for headcount reductions, facility consolidations and site closures, exit costs,

and other asset charges. Restructuring and other costs consist of the following:

(Amounts in thousands except share data and where otherwise indicated)

	Years Ended December 31,						
		2022		2021		2020	
Restructuring	\$	30,480	\$	26,705	\$	44,468	
Other costs, net		8,510		11,731		7,004	
Restructuring and other costs	\$	38,990	\$	38,436	\$	51,472	

⁽³⁾ Loss (gain) on dispositions includes working capital adjustments related to dispositions.

Selected financial information by segment (continued):

Capital expenditures:	2022	2021	2020
Engineered Products	\$ 39,765	\$ 48,453	\$ 23,515
Clean Energy & Fueling	33,489	25,167	26,903
Imaging & Identification	14,695	10,671	10,690
Pumps & Process Solutions	82,817	44,578	52,804
Climate & Sustainability Technologies	41,426	34,335	42,923
Corporate	8,770	8,261	8,857
Consolidated total	\$ 220,962	\$ 171,465	\$ 165,692

Total assets at December 31:	2022	2021
Engineered Products	\$ 1,771,689	\$ 1,678,317
Clean Energy & Fueling	3,068,260	3,201,504
Imaging & Identification	1,821,649	1,871,039
Pumps & Process Solutions (6)	2,161,210	1,709,852
Climate & Sustainability Technologies	1,525,449	1,358,118
Corporate (7)	548,262	584,797
Total assets	\$ 10,896,519	\$ 10,403,627

⁽⁶⁾ Increase primarily driven by 2022 acquisitions. See Note 3 — Acquisitions for additional information.

⁽⁷⁾ Corporate assets are comprised primarily of cash and cash equivalents.

	Revenue						Long-Lived Assets (8)				
	Years Ended December 31,						At December 31,				
	 2022		2021		2020		2022		2021		
United States	\$ 4,847,321	\$	4,305,957	\$	3,677,285	\$	629,140	\$	584,948		
Europe	1,792,020		1,797,138		1,482,520		291,921		283,952		
Asia	939,093		901,141		745,150		57,253		62,210		
Other Americas	667,673		612,751		535,091		21,763		20,627		
Other	261,981		290,094		243,714		4,748		5,573		
Consolidated total	\$ 8,508,088	\$	7,907,081	\$	6,683,760	\$	1,004,825	\$	957,310		

⁽⁸⁾ Long-lived assets are comprised of net property, plant and equipment.

The U.S. was the largest geographical market for the Engineered Products, Clean Energy & Fueling, Pumps & Process Solutions, and Climate & Sustainability Technologies segments, and Europe was the largest market for the Imaging & Identification segment.

Revenue is attributed to regions based on the location of the Company's customer, which in some instances is an intermediary and not necessarily the end user. The Company's businesses serve thousands of customers, none of which individually accounted for more than 10% of consolidated revenue.

⁽⁴⁾ Certain expenses are maintained at the corporate level and not allocated to the segments. These expenses include executive and functional compensation costs, non-service pension costs, non-operating insurance expenses, shared business services overhead costs, deal related expenses and various administrative expenses relating to the corporate headquarters.

⁽⁵⁾ Other depreciation and amortization relates to property, plant, and equipment and intangibles, and excludes amounts related to purchase accounting expenses and restructuring and other costs.

(Amounts in thousands except share data and where otherwise indicated)

20. Earnings per Share

The following table sets forth a reconciliation of the information used in computing basic and diluted earnings per share:

	Years Ended December 31,					31,
		2022		2021		2020
Net earnings	\$	1,065,376	\$	1,123,818	\$	683,451
Basic earnings per common share:						
Net earnings	\$	7.47	\$	7.81	\$	4.74
Weighted average basic shares outstanding	_1	42,681,000	1	43,923,000	14	44,050,000
Diluted earnings per common share:						
Net earnings	\$	7.42	\$	7.74	\$	4.70
Weighted average diluted shares outstanding	_1	43,595,000	1	45,273,000	14	45,393,000

The following table is a reconciliation of the share amounts used in computing earnings per share:

	Years Ended December 31,		
	2022	2021	2020
Weighted average shares outstanding - basic	142,681,000	143,923,000	144,050,000
Dilutive effect of assumed exercise of SARs and vesting of performance			
shares and RSUs	914,000	1,350,000	1,343,000
Weighted average shares outstanding - diluted	143,595,000	145,273,000	145,393,000

Diluted earnings per share amounts are computed using the weighted average number of common shares outstanding and, if dilutive, potential common shares outstanding during the period. Potential common shares consist of the incremental common shares issuable upon the exercise of SARs and vesting of performance shares and RSUs, as determined using the treasury stock method. For the years ended December 31, 2022, 2021 and 2020, the weighted average number of anti-dilutive potential common shares excluded from the calculation above totaled 21,173, 1,072 and 30,378, respectively.

21. Stockholders' Equity

Share Repurchases

In November 2020, the Company's Board of Directors approved a new standing share repurchase authorization, whereby the Company may repurchase up to 20 million shares beginning on January 1, 2021 through December 31, 2023. This share repurchase authorization replaced the February 2018 share repurchase authorization.

The Company's prior February 2018 share repurchase authorization, whereby the Company was authorized to repurchase up to 20 million shares of its common stock, expired on December 31, 2020. Upon expiration, there were 7,380,879 shares remaining.

On August 31, 2022, the Company entered into a \$500,000 accelerated share repurchase agreement (the "ASR Agreement") with Bank of America N.A. ("Bank of America") to repurchase its shares in an accelerated share repurchase program (the "ASR Program"). The ASR Program is classified as equity, initially recorded at fair value with no subsequent remeasurement. The Company conducted the ASR Program under the November 2020 share repurchase authorization. The Company funded the ASR Program with net proceeds from commercial paper.

Under the terms of the ASR Agreement, the Company paid Bank of America \$500,000 on September 1, 2022 and on that date received initial deliveries of 3,201,025 shares, representing a substantial majority of the shares expected to be retired over the course of the ASR Agreement. In December 2022, Bank of America delivered 691,270 additional shares which completed the ASR Program. During 2022, the Company received a total of 3,892,295 shares upon completion of the ASR

(Amounts in thousands except share data and where otherwise indicated)

Agreement. The total number of shares ultimately repurchased under the ASR Agreement was based on the volume-weighted average share price of Dover's common stock during the calculation period of the ASR Program, less a discount, which was \$128.46 over the term of the ASR Program.

During the years ended December 31, 2022, 2021, and 2020, exclusive of the ASR Program, the Company repurchased 641,428, 182,951, and 979,165 shares of common stock at a total cost of \$85,000, \$21,637, and \$106,279 or \$132.52, \$118.27, and \$108.54 per share, respectively.

As of December 31, 2022, 15,283,326 shares remain authorized for repurchase under the November 2020 share repurchase authorization.

SCHEDULE II

VALUATION AND QUALIFYING ACCOUNTS Years Ended December 31, 2022, 2021 and 2020 (In thousands)

Deferred Tax Valuation Allowance	Balance at Beginning of Year		Additions	Reductions	Balance at End of Year	
Year Ended December 31, 2022	\$	306,066	4,960	(39,823)	\$	271,203
Year Ended December 31, 2021	\$	287,679	38,514	(20,127)	\$	306,066
Year Ended December 31, 2020	\$	244,153	49,130	(5,604)	\$	287,679
	Balance at Beginning of Year					
LIFO Reserve	В	eginning	Charged to Cost and Expense	Reductions	_	alance at
LIFO Reserve Year Ended December 31, 2022	В	eginning	Cost and	Reductions (1,333)	Er	
	B	eginning of Year	Cost and Expense		E r	nd of Year

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Based on an evaluation under the supervision and with the participation of the Company's management, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures as defined in Rule 13a-15(e) under the Exchange Act were effective as of December 31, 2022 to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms and (ii) accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Controls

During the fourth quarter of 2022, there were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Inherent Limitations Over Internal Controls

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

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

Management's report on the effectiveness of the Company's internal control over financial reporting is included in Item 8 of this Form 10-K. Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods is subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

ITEM 9B. OTHER INFORMATION

None.

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ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information with respect to the corporate governance matters required to be included pursuant to this Item 10 will be included in the 2023 Proxy Statement that will be filed with the Securities and Exchange Commission pursuant to Rule 14a-6 under the Exchange Act in accordance with applicable SEC deadlines, and is incorporated in this Item 10 by reference.

As set forth below is a list of the members of our Board of Directors as of February 10, 2023.

Deborah L. DeHaas ¹

Former Vice Chairman of Deloitte and Managing Partner of the Center for Board Effectiveness

H. John Gilbertson, Jr. 1,4

Retired Managing Director, Goldman Sachs Group Inc.

Kristiane C. Graham^{2,3}

Private Investor

Michael F. Johnston, Chairman of the Board^{2,3}

Retired Chief Executive Officer, Visteon Corporation

Michael Manley^{1,4}

Chief Executive Officer of AutoNation, Inc.

Eric A. Spiegel^{1,4}

Former President and CEO of Siemens USA

Richard J. Tobin

President & Chief Executive Officer, Dover Corporation

Stephen M. Todd¹

Former Global Vice Chairman of Assurance Professional Practice of Ernst & Young Global Limited

Stephen K. Wagner^{1,3}

Former Senior Advisor, Center for Corporate Governance, Deloitte & Touche LLP

Keith E. Wandell^{2,4}

Retired President and Chief Executive Officer, Harley-Davidson, Inc.

Mary A. Winston^{2,4}

President of WinsCo Enterprises Inc.;

Former Executive Vice President & Chief Financial Officer, Family Dollar Stores, Inc.

The information with respect to Section 16(a) reporting compliance required to be included in this Item 10 will be included in our 2023 Proxy Statement and is incorporated in this Item 10 by reference.

The Company has adopted a code of ethics that applies to its chief executive officer and senior financial officers. A copy of this code of ethics can be found on our website at www.dovercorporation.com. In the event of any amendment to, or waiver from, the code of ethics, we will publicly disclose the amendment or waiver by posting the information on our website.

¹ Members of Audit Committee

² Members of Compensation Committee

³ Members of Governance & Nominating Committee

⁴Members of Finance Committee

ITEM 11. EXECUTIVE COMPENSATION

The information with respect to executive compensation and the compensation committee required to be included pursuant to this Item 11 will be included in our 2023 Proxy Statement and is incorporated in this Item 11 by reference.

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

The information regarding security ownership of certain beneficial owners and management that is required to be included pursuant to this Item 12 will be included in our 2023 Proxy Statement and is incorporated in this Item 12 by reference.

Equity Compensation Plans

The Equity Compensation Plan Table below presents information regarding our equity compensation plans at December 31, 2022:

	(a)	(b)	(c)
	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and	Weighted- Average Exercise Price of Outstanding Options, Warrants and	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected
Plan Category	Rights (1)	Rights	in Column (a)) (2)
Equity compensation plans approved by stockholders	2,678,025	\$ 98.70	12,533,401
Equity compensation plans not approved by stockholders			_
Total	2,678,025	\$ 98.70	12,533,401

- 1. Column (a) includes shares issuable pursuant to outstanding stock appreciation rights ("SARs"), restricted stock units ("RSUs") and performance share awards ("PSAs") under the Company's 2021 Omnibus Incentive Plan (the "2021 Plan") and 2012 Equity and Cash Incentive Plan (the "2012 Plan"). Performance shares are subject to satisfaction of the applicable performance criteria over a three-year performance period. RSUs and PSAs are not reflected in the weighted exercise price in column (b) as these awards do not have an exercise price.
- 2. Column (c) consists of shares available for future issuance under the Company's 2021 Plan. Under the 2021 Plan, the Company may grant stock options, SARs, restricted stock, RSUs, PSAs, director shares, or deferred stock units. Under the 2021 Plan, the number of shares available for issuance will be reduced (i) by one share for each share issued pursuant to options or SARs and (ii) by three shares for each share of stock issued pursuant to restricted stock, RSUs, PSAs, director share, or deferred stock unit awards.

As of December 31, 2022, equity securities have been authorized for issuance to employees and/or non-employee directors under the 2021 Plan and its predecessor plan (the "2012 Plan"). Although the 2012 Plan has expired and no further awards may be granted under the Plan, there remain outstanding SARs, RSUs, and PSAs under the 2012 Plan, which are reflected in Column (a) of the table.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information with respect to any director independence, related party transaction policies and any reportable transaction, business relationship, or indebtedness between the Company and the beneficial owners of more than 5% of the Common Stock, the directors or nominees for director of the Company, the executive officers of the Company, or the members of the immediate families of such individuals that are required to be included pursuant to this Item 13 will be included in the 2023 Proxy Statement and is incorporated in this Item 13 by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information with respect to the Company's relationship with its independent registered public accounting firm and fees paid thereto required to be included pursuant to this Item 14 will be included in the 2023 Proxy Statement and is incorporated in this Item 14 by reference.

The information with respect to audit committee pre-approval policies and procedures required to be included pursuant to this Item 14 will be included in the 2023 Proxy Statement and is incorporated in this Item 14 by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- a) The following documents are filed as part of this report:
- (1) Financial Statements. The financial statements are set forth under "Item 8. Financial Statements and Supplementary Data" of this Form 10-K.
- (2) Schedules. The following financial statement schedule is set forth under "Item 8. Financial Statements and Supplementary Data" of this Form 10-K. All other schedules have been omitted because they are not required, are not applicable or the required information is included in the financial statements or the notes thereto.
 - Schedule II Valuation and Qualifying Accounts
- (3) Exhibits. The exhibits below are filed or incorporated by reference as part of this Form 10-K. The exhibits will be filed with the SEC but will not be included in the printed version of the Annual Report to Shareholders.

EXHIBIT INDEX

- (3)(i) Fifth Restated Certificate of Incorporation of the Company, filed as Exhibit 3(i)(a) to the Company's Current Report on Form 8-K filed May 7, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (3)(ii) Amended and Restated By-Laws of the Company, effective as of February 14, 2020, filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on February 19, 2020 (SEC File No. 001-04018), are incorporated by reference.
- (4.1) Indenture, dated as of June 8, 1998 between the Company and The First National Bank Chicago, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed June 12, 1998 (SEC File No. 001-04018), is incorporated by reference.
- (4.2) Form of 6.65% Debentures due June 1, 2028 (\$200,000,000 aggregate principal amount), filed as Exhibit 4.4 to the Company's Current Report on Form 8-K filed June 12, 1998 (SEC File No. 001-04018), is incorporated by reference.
- (4.3) Indenture, dated as of February 8, 2001 between the Company and BankOne Trust Company, N.A., as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed February 13, 2001 (SEC File No. 001-04018), is incorporated by reference.
- (4.4) First Supplemental Indenture, dated as of October 13, 2005, among the Company, J.P. Morgan Trust Company, National Association, as original trustee, and The Bank of New York, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed October 13, 2005 (SEC File No. 001-04018), is incorporated by reference.
- (4.5) Form of 5.375% Debentures due October 15, 2035 (\$300,000,000 aggregate principal amount), filed as Exhibit 4.3 to the Company's Current Report on Form 8-K filed October 13, 2005 (SEC File No. 001-04018), is incorporated by reference.
- (4.6) Second Supplemental Indenture, dated as of March 14, 2008, between the Company and The Bank of New York, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed March 14, 2008 (SEC File No. 001-04018), is incorporated by reference.
- (4.7) Form of Global Note representing 6.60% Notes due March 15, 2038 (\$250,000,000 aggregate principal amount), filed as Exhibit 4.3 to the Company's Current Report on Form 8-K filed March 14, 2008 (SEC File No. 001-04018), is incorporated by reference.
- (4.8) Third Supplemental Indenture, dated as of February 22, 2011, between the Company and The Bank of New York Mellon, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed February 22, 2011 (SEC File No. 001-04018), is incorporated by reference.
- (4.9) Form of 5.375% Notes due March 1, 2041 (\$350,000,000 aggregate principal amount), filed as Exhibit 4.3 to the Company's Current Report on Form 8-K filed February 22, 2011 (SEC File No. 001-04018), is incorporated by reference.
- (4.10) Fourth Supplemental Indenture, dated as of December 2, 2013, between the Company and The Bank of New York Mellon, as trustee and The Bank of New York Mellon, London Branch, as paying agent, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed December 3, 2013 (SEC File No. 001-04018), is incorporated by reference.
- (4.11) Fifth Supplemental Indenture, dated as of November 3, 2015, between the Company and J.P. Morgan Trust Company National Association, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 3, 2015 (SEC File No. 001-04018), is incorporated by reference.

- (4.12) Form of Global Note representing the 3.150% Notes due 2025 (\$400,000,000 aggregate principal amount) (included as Exhibit A to the Fifth Supplemental Indenture), filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 3, 2015 (SEC File No. 001-04018), is incorporated by reference.
- (4.13) Sixth Supplemental Indenture, dated as of November 9, 2016, between the Company and J.P. Morgan Trust Company National Association, as trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 9, 2016 (SEC File No. 001-04018), is incorporated by reference.
- (4.14) Form of Global Note representing the 1.250% Notes due 2026 (€600,000,000 aggregate principal amount) (included as Exhibit A to the Sixth Supplemental Indenture), filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 9, 2016 (SEC File No. 001-04018), is incorporated by reference.
- (4.15) Seventh Supplemental Indenture, dated as of November 4, 2019, between the Company and the Bank of New York Mellon, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 4, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (4.16) Form of Global Note representing the 0.750% Notes due 2027 (€500,000,000 aggregate principal amount) (included as Exhibit A to the Seventh Supplemental Indenture), filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed on November 4, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (4.17) Eighth Supplemental Indenture, dated as of November 4, 2019, between the Company and the Bank of New York Mellon, as trustee, filed as Exhibit 4.3 to the Company's Current Report on Form 8-K filed on November 4, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (4.18) Form of Global Note representing the 2.950% Notes due 2029 (\$300,000,000 aggregate principal amount) (included as Exhibit A to the Eighth Supplemental Indenture), filed as Exhibit 4.4 to the Company's Current Report on Form 8-K filed on November 4, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (4.19) Description of Dover Corporation's securities registered pursuant to Section 12 of the Exchange Act, filed as Exhibit 4.19 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (SEC File No. 001-04018), is incorporated by reference.
 - The Company agrees to furnish to the Securities and Exchange Commission upon request, a copy of any instrument with respect to long-term debt under which the total amount of securities authorized does not exceed 10 percent of the total consolidated assets of the Company.
- (10.1) Five-Year Credit Agreement, dated as of October 4, 2019, among the Company, the Borrowing Subsidiaries party thereto from time to time, the Lenders party thereto, and JPMorgan Chase Bank, N.A, as Administrative Agent, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed October 10, 2019 (SEC File No. 001-04018), is incorporated by reference.
- (10.2) Tax Matters Agreement, dated May 9, 2018, by and between Dover Corporation and Apergy Corporation, filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed May 11, 2018 (SEC File No. 001-04018), is incorporated by reference.
- (10.3) Dover Corporation Executive Officer Annual Incentive Plan, as amended and restated as of January 1, 2009, filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed May 13, 2009 (SEC File No. 001-04018), is incorporated by reference.*
- (10.4) First Amendment to the Dover Corporation Executive Officer Annual Incentive Plan, as amended November 14, 2019, filed as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (SEC File No. 001-04018), is incorporated by reference.*
- (10.5) <u>Dover Corporation Deferred Compensation Plan, as amended and restated as of September 21, 2020, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2020 (SEC File No. 001-04018), is incorporated by reference.*</u>
- (10.6) First Amendment, dated as of November 23, 2021, to the Dover Corporation Deferred Compensation Plan (1)*
- (10.7) <u>Dover Corporation Pension Replacement Plan (formerly the Supplemental Executive Retirement Plan), as amended and restated as of January 1, 2010, filed as Exhibit 10.11 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009 (SEC File No. 001-04018), is incorporated by reference.*</u>
- (10.8) First Amendment to the Dover Corporation Pension Replacement Plan, as amended and restated as of January 1, 2010, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2013 (SEC File No. 001-04018), is incorporated by reference.*
- (10.9) Second Amendment, dated as of November 28, 2016, to the Dover Corporation Pension Replacement Plan, as amended and restated as of January 1, 2010, filed as Exhibit 10.19 to the Company's Annual Report on Form 10-K for the period ended December 31, 2016 (SEC File No. 001-04018), is incorporated by reference.*
- (10.10) Third Amendment, dated as of May 8, 2018, to the Dover Corporation Pension Replacement Plan, as amended and restated as of January 1, 2010, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2018 (SEC File No. 001-04018), is incorporated by reference.*

- (10.11) <u>Dover Corporation Executive Severance Plan (as amended and restated effective August 5, 2021), filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed August 11, 2021 (SEC File No. 001-04018) is incorporated by reference.*</u>
- (10.12) Dover Corporation Senior Executive Change-in-Control Severance Plan (as amended and restated effective August 5, 2021), filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed August 11, 2021 (SEC File No. 001-04018) is incorporated by reference.*
- (10.13) Dover Corporation 2012 Equity and Cash Incentive Plan, effective as of May 3, 2012, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2012 (SEC File No. 001-04018), is incorporated by reference.*
- (10.14) Amendment No. 1 to the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013 (SEC File No. 001-04018), is incorporated by reference.*
- (10.15) Amendment No. 2, adopted and effective as of August 6, 2014, to the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2014 (SEC File No. 001-04018), is incorporated by reference.*
- (10.16) Amendment Number 3, adopted and effective as of February 12, 2021, to the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.17) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2014 (SEC File No. 001-04018), is incorporated by reference.*
- (10.18) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.25 to the Company's Annual Report on Form 10-K for the period ended December 31, 2014 (SEC File No. 001-04018), is incorporated by reference.*
- (10.19) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2016 (SEC File No. 001-04018), is incorporated by reference.*
- (10.20) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2017 (SEC File No. 001-04018), is incorporated by reference.*
- (10.21) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2018 (SEC File No. 001-04018), is incorporated by reference.*
- (10.22) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2019 (SEC File No. 001-04019), is incorporated by reference.*
- (10.23) Form of award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive
 Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2020
 (SEC File No. 001-04019), is incorporated by reference.*
- (10.24) Form of 2021 award grant letter for SSAR grants made under the Dover Corporation 2012 Equity and Cash Incentive Plan filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.25) Form of award grant letter for performance share awards made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2019 (SEC File No. 001-04018), is incorporated by reference.*
- (10.26) Form of award grant letter for performance share awards made under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2020 (SEC File No. 001-04018), is incorporated by reference.*
- (10.27) Form of 2021 award grant letter for performance share awards made under the Dover Corporation 2012 Equity and Cash Incentive Plan filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.28) Form of Restricted Stock Unit Award Letter under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2019 (SEC File No. 001-04018), is incorporated by reference.*
- (10.29) Form of Restricted Stock Unit Award Letter under the Dover Corporation 2012 Equity and Cash Incentive Plan, filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2020 (SEC File No. 001-04018), is incorporated by reference.*

- (10.30) Form of 2021 award grant letter for RSU awards made under the Dover Corporation 2012 Equity and Cash Incentive Plan filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.31) <u>Dover Corporation 2021 Omnibus Incentive Plan, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed May 10, 2021 (SEC File No. 001-04018), is incorporated by reference.*</u>
- (10.32) Form of 2021 award grant letter for SSAR grants made under the Dover Corporation 2021 Omnibus Incentive Plan filed as Exhibit 10.40 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.33) Form of 2021 award grant letter for RSU awards made under the Dover Corporation 2021 Omnibus Incentive Plan, filed as Exhibit 10.41 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.34) Form of 2022 award grant letter for SSAR grants made under the Dover Corporation 2021 Omnibus Incentive Plan filed as Exhibit 10.43 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.35) Form of 2022 award grant letter for RSU awards made under the Dover Corporation 2021 Omnibus Incentive Plan filed as Exhibit 10.44 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.36) Form of 2022 award grant letter for performance share awards made under the Dover Corporation 2021 Omnibus Incentive Plan filed as Exhibit 10.46 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 (SEC File No. 001-04018), is incorporated by reference.*
- (10.37) Form of 2023 award grant letter for SSAR grants made under the Dover Corporation 2021 Omnibus Incentive Plan*(1)
- (10.38) Form of 2023 award grant letter for RSU awards made under the Dover Corporation 2021 Omnibus Incentive Plan*(1)
- (10.39) Form of 2023 award grant letter for performance share awards made under the Dover Corporation 2021 Omnibus Incentive Plan *(1)
- (10.40) Employment Agreement of Richard J. Tobin dated March 16, 2018, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 20, 2018 (SEC File No. 001-04018), is incorporated by reference.*
- (10.41) Amendment to Employment Agreement of Richard J. Tobin, dated as of February 19, 2021, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed February 19, 2021 (SEC File No. 001-04018), is incorporated by reference.*
 - (21) Subsidiaries of Dover. (1)
 - (23) Consent of Independent Registered Public Accounting Firm. (1)
 - (24) Power of Attorney (included in signature page). (1)
- (31.1) Certification pursuant to Rule 13a-14 of the Securities and Exchange Act of 1934, as amended, signed and dated by Brad M. Cerepak. (1)
- (31.2) Certification pursuant to Rule 13a-14 of the Securities and Exchange Act of 1934, as amended, signed and dated by Richard J. Tobin. (1)
 - (32) Certification pursuant to 18 U.S.C. Section 1350, signed and dated by Richard J. Tobin and Brad M. Cerepak, (1)
- (101) The following materials from Dover Corporation's Annual Report on Form 10-K for the year ended December 31, 2022 formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) Consolidated Statements of Earnings, (ii) Consolidated Statements of Comprehensive Earnings (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to the Consolidated Financial Statements. (1)
- (104) Cover Page formatted in Inline XBRL and contained in Exhibit 101. (1)
 - * Executive compensation plan or arrangement.
 - (1) Filed herewith.

ITEM 16. FORM 10-K SUMMARY

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

DOVER CORPORATION

/s/ Richard J. Tobin

Richard J. Tobin

President and Chief Executive Officer

Date: February 10, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated. Each of the undersigned, being a director or officer of Dover Corporation (the "Company"), hereby constitutes and appoints Richard J. Tobin, Brad M. Cerepak and Ivonne M. Cabrera and each of them (with full power to each of them to act alone), his or her true and lawful attorney-in-fact and agent for him or her and in his or her name, place and stead in any and all capacities, to sign the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 under the Securities Exchange Act of 1934, as amended, and any and all amendments thereto, and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission and any other appropriate authority, granting unto such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing required and necessary to be done in and about the premises in order to effectuate the same as fully to all intents and purposes as he or she might or could do if personally present, hereby ratifying and confirming all that such attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

Signature	Title	Date
/s/ Michael F. Johnston Michael F. Johnston	Chairman, Board of Directors	February 10, 2023
/s/ Richard J. Tobin Richard J. Tobin	Chief Executive Officer, President and Director (Principal Executive Officer)	February 10, 2023
/s/ Brad M. Cerepak Brad M. Cerepak	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 10, 2023
/s/ Ryan W. Paulson Ryan W. Paulson	Vice President, Controller (Principal Accounting Officer)	February 10, 2023
/s/ Deborah L. DeHaas Deborah L. DeHaas	Director	February 10, 2023
/s/ H. John Gilbertson, Jr. H. John Gilbertson, Jr.	Director	February 10, 2023
/s/ Kristiane C. Graham Kristiane C. Graham	Director	February 10, 2023

Signature	Title	Date
/s/ Michael Manley Michael Manley	Director	February 10, 2023
/s/ Eric A. Spiegel Eric A. Spiegel	Director	February 10, 2023
/s/ Stephen M. Todd Stephen M. Todd	Director	February 10, 2023
/s/ Stephen K. Wagner Stephen K. Wagner	Director	February 10, 2023
/s/ Keith E. Wandell Keith E. Wandell	Director	February 10, 2023
/s/ Mary A. Winston Mary A. Winston	Director	February 10, 2023