Spirax-Sarco Engineering plc

www.spiraxsarcoengineering.com

News Release

Thursday 10th March 2022

Record performance in 2021; currently expect strong growth in 2022

HIGHLIGHTS

Statutory	**2021**	**2020**	**Reported**
Revenue+	£1,344.5m	£1,193.4m	+13%
Operating profit	£320.9m	£249.0m	+29%
Operating profit margin	23.9%	20.9%	+300 bps
Profit before taxation	£314.5m	£240.1m	+31%
Basic earnings per share	318.3p	235.5p	+35%
Dividend per share	136.0p	118.0p	+15%

Adjusted*	**2021**	**2020**	**Reported**	**Organic***
Revenue+	£1,344.5m	£1,193.4m	+13%	+17%
Adjusted operating profit*	£340.3m	£270.4m	+26%	+31%
Adjusted operating profit margin*	25.3%	22.7%	+260 bps	+280 bps
Adjusted profit before taxation*	£333.9m	£261.5m	+28%	
Adjusted earnings per share*	338.9p	256.6p	+32%	
Cash conversion	82%	102%		

- Revenues up 13%, or 17% organically; industrial production growth (IP) 7.6%
- Record adjusted operating profit margin of 25.3%, up 260 bps or 300 bps on a statutory basis
- Watson-Marlow organic sales up 32%; strong growth in all sectors
- Steam Specialties organic sales up 12%, well above IP; demand growth even stronger
- Electric Thermal Solutions organic sales up 7%; demand growth above Steam Specialties**
- Record closing order book across all three Businesses
- Accelerated revenue investments to support future organic growth
- Net debt^ reduced to 0.35x EBITDA* despite record capital investment
- Total dividend up by 15% to 136.0p

Nicholas Anderson, Group Chief Executive, commenting on the results said:
"The excellent performance of our Group in 2021 is testament to the strength of our organisation, business model and strategy that delivered organic sales 13% above pre-pandemic levels and record margins despite global supply chain constraints. These results demonstrate the determination of our teams to remain focused on high quality execution, while also continuing to make significant investments to support our future growth and sustainability. We are deeply proud of all our colleagues for achieving such outstanding performance.

"Our robust business model and disciplined execution of our strategies have underpinned the resilience of our performance throughout economic cycles, so we remain confident in our ability to navigate the growing uncertainties ahead. For 2022 we currently anticipate strong sales growth, driven by record order books and continued global Industrial Production growth. While adjusted operating profit growth will be reduced by the full-year impact of revenue investments in 2021, we currently anticipate the adjusted operating profit margin in 2022 will still be comfortably above pre-pandemic levels."

†The term 'sales' is used interchangeably with 'revenue' when describing the financial performance of the business.
* Organic measures are at constant currency and exclude contributions from acquisitions and disposals. See Note 2 to the Financial Statements for an explanation of alternative performance measures.
**Electric Thermal Solutions demand growth was ahead of demand growth in Steam Specialties, after adjusting for the record US$14 million order from the US Navy in 2020.
^Net debt includes total borrowings, cash and bank overdrafts but excludes IFRS 16 lease liabilities, as set out in Note 8 to the Financial Statements.

For further information, please contact:
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Analyst Meeting and audio webcast
The meeting with analysts will be available as a live audio webcast at 9.00 am on the Company's website at www.spiraxsarcoengineering.com or via the following link:
https://edge.media-server.com/mmc/p/2szxsa6d *and a recording will be made available on the website shortly after the meeting.*

Telephone dial-in
Analysts who cannot attend in person can join the meeting using the instructions provided below:

Location	***Purpose***	***Phone Type***	***Number***
United Kingdom and International	*Participant*	*Local*	*+44 (0) 33 0551 0200*

1. *5-10 minutes prior to the call start time, call the participant dial-in number listed above.*
2. *Provide the audio operator with the password: Spirax-Sarco Engineering.*

About Spirax-Sarco Engineering plc
Spirax-Sarco Engineering plc is a thermal energy management and niche pumping specialist. It comprises three world-leading Businesses: Steam Specialties, for the control and management of steam; Electric Thermal Solutions, for advanced electrical process heating and temperature management solutions; and Watson-Marlow, for peristaltic pumping and associated fluid path technologies. The Steam Specialties and Electric Thermal Solutions Businesses provide a broad range of fluid control and electrical process heating products, engineered packages, site services and systems expertise for a diverse range of industrial and institutional customers. Both Businesses help their customers improve production efficiency, meet their environmental sustainability targets, improve their product quality and enhance the safety of their operations. Watson-Marlow provides solutions for a wide variety of demanding fluid path applications with highly accurate, controllable and virtually maintenance free pumps and associated technologies.

The Group is headquartered in Cheltenham, UK, has strategically located manufacturing plants around the world and employs more than 8,700 people, including 2,000 direct sales and service engineers. The Company's shares have been listed on the London Stock Exchange since 1959 (symbol: SPX) and it is a constituent of the FTSE 100 and the FTSE4Good index.

Further information can be found at www.spiraxsarcoengineering.com

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<u>Chair's Statement</u>

Introduction
Our excellent performance in 2021 was achieved against a backdrop of industrial production growth (IP) of 7.6%, significant supply chain disruptions, a strong currency headwind and the ongoing global pandemic.

Our position on Ukraine and Russia
In response to the further escalation of the conflict ordered by the Russian authorities, as well as the tragic consequences for the people and economy of Ukraine, we have suspended all trading with Russia. This means all Group Companies will no longer trade with, or within, Russia. We will continue to support our 70 Russian colleagues by paying their salaries for a period of time. Our business within the region represented close to 1% of Group revenues in 2021.

Adapting our working practices
Having adapted quickly to the constraints caused by the COVID-19 pandemic in 2020, our teams have been operating effectively throughout 2021. Our direct sales and service engineers have embraced virtual tools to engage customers and continued to self-generate sales. In-person visits to customers resumed during the year where this was possible. Our manufacturing facilities have remained open and continued operating with strong COVID-19 protocols in place in order to meet significant levels of demand. Following a successful transition to home working for office-based colleagues during the pandemic, our Group has adopted a hybrid approach to work going forward. This provides greater flexibility for individuals while still meeting the needs of our customers and continuing to support collaboration.

The health, safety and wellbeing of our colleagues remained our highest priority during 2021. We recorded an improved Health & Safety performance across the Group, achieving no lost-time accidents in five of the twelve months and reducing the number of lost-time injuries by 55%, achieving its lowest level since we began measurement. We maintained our COVID-19 Minimum Standards across all manufacturing locations and offices and our controls were commended by Inspectors from the UK Health and Safety Executive. We applaud and thank our teams for their continued vigilance and commitment to ensuring we maintain safe places of work. We also supported our colleagues during the year by producing a wellbeing toolkit in multiple languages, announcing an additional 'wellbeing day' of leave in 2022 and launching a Group-wide Inclusion Plan called Everyone is Included.

Recognising our colleagues
On behalf of the Board, I would like to thank all our colleagues around the world, who have lived our Values in support of our Purpose to deliver outstanding outcomes for all our stakeholders. Our teams have pulled together to meet the needs of our customers and worked closely with our supply chain partners to mitigate a challenging environment, while supporting each other as well as our local communities. This has been especially evident in the way our teams have embraced our volunteering and community-based initiatives with over 11,000 volunteering hours recorded in 2021. These hours, taken together with financial and in-kind support, represented close to £1 million being donated to good causes.

Meeting strong demand growth
In 2021 our Group recovered rapidly from the economic impacts of the COVID-19 pandemic. We saw unprecedented demand growth across all three Businesses, particularly in Watson-Marlow. In Steam Specialties, demand growth was well in excess of IP and in Electric Thermal Solutions (ETS) demand growth was ahead of demand growth in Steam Specialties, after adjusting for the record US$14 million US Navy order in 2020. Our growth benefitted from the exceptional demand from our customers in the

Pharmaceutical & Biotechnology sector, with the Group's other revenue streams growing well above IP. Our organic sales growth of 17% in 2021 more than offset the 3% decline experienced in 2020, demonstrating both the resilience of our business model as well as our exposure to attractive long-term demand trends, including the drive towards decarbonisation.

This strong growth was delivered amidst an increasingly challenging operating environment. Our teams were required to deliver a significant ramp-up in capacity, achieved through the expansion of our existing manufacturing facilities, along with additional shifts and new equipment, while managing the impact of COVID-19 related absences. In parallel, there was increasing disruption to the global supply chain throughout the year, impacting freight timelines and restricting the availability of components, such as motors and printed circuit boards.

While all three Businesses were impacted by delayed deliveries from their supply chains, the effects were greater within Watson-Marlow and ETS. In Watson-Marlow, shipments were impacted in the second half of the year by shortages in raw materials and components. Within ETS, supply chain constraints combined with delays in the delivery of operational performance improvements, resulted in lower than anticipated sales growth. Our strategic sourcing initiatives partially offset these challenges and our Group achieved sales growth materially above IP, ending 2021 with a record order book.

During 2021 we saw material cost inflation across a variety of input commodities including energy, stainless steel, plastics and rubber. Through our proactive approach to price management, we mitigated the impact of these pressures on our adjusted operating profit margin.

This record adjusted operating profit margin was achieved despite a significant increase in our revenue investments, which underpin our future organic sales growth and adjusted operating profit margin improvement. During 2021, these investments were focused on our sustainability and digital initiatives, as well as new product development and increasing our direct sales force. In light of strong financial performance throughout the year, these investments were more weighted towards the second half. As a consequence, the adjusted operating profit margin in the year did not reflect the full-year effect of the associated costs, which will be felt in 2022.

Board highlights

The Board met in-person twice during the year, with the remaining six meetings held virtually. We had the opportunity to speak with colleagues from around the Group through employee engagement forums and attendance at the Group's inaugural Leadership Conference. This engagement has informed key decisions, reflecting colleagues' views on topics such as hybrid-working and wellbeing, now incorporated within the Group's new Inclusion Plan.

During the year, we approved substantial investment programmes to support our future growth, including investments in our manufacturing capacity such as the decision to accelerate the expansion of Watson-Marlow's BioPure facility in Portsmouth (UK). We supported investments to deliver on our net zero targets, through commencing the decarbonisation of the Steam Specialties' manufacturing facility in Cheltenham (UK), as well as continuing to invest in the development of products and solutions to help our customers decarbonise their industrial processes. The Board also approved the acquisition of Cotopaxi, a digitally-enabled global energy consulting and optimisation company. The acquisition was subsequently completed in January 2022 and will help accelerate the implementation of the Group's Digital strategy.

Corporate governance

Having strengthened the Board in 2020, we have 40% female representation and 30% ethnic diversity on the Board. In July 2021, Dr Trudy Schoolenberg stepped down as planned after nine years as a Director.

On behalf of our shareholders, the Board acknowledges with gratitude Trudy's significant contribution to the Group's growth and prosperity over the last nine years. Trudy was succeeded as Senior Independent Director by Richard Gillingwater, who joined the Board in March 2021.

To continue enhancing the Board's effectiveness, we reorganised membership of our Board Committees, better aligning the skills of individual Non-Executive Directors across our different Committees. We also undertook a Board effectiveness review, supported by independent advisors Egon Zehnder.

Management change

During 2021, Dominique Mallet, President of our Electric Thermal Solutions (ETS) Business, informed us of a change in his personal circumstances which meant he was unable to relocate to the USA from France as planned and had instead elected to pursue his career outside of our Group. We were sorry to see Dominique leave but we fully supported his decision and he left with our best wishes and sincere thanks for his contribution. We were very pleased to appoint Armando Pazos as President for ETS, effective 1st December 2021. Armando is an experienced industrial leader who joined ETS in March 2020 as Vice President Global Sales, following a 24-year career with Ingersoll Rand and Trane. Armando was instrumental in the development of the ETS strategy alongside Dominique and the wider management team.

Dividends

The interim dividend paid on 12th November 2021 was 38.5 pence per share, an increase of 15% (2020: 33.5 pence per share). The Board is recommending an increase in the final dividend of 15% to 97.5 pence per share (2020: 84.5 pence). Subject to approval of the final dividend by shareholders at the Annual General Meeting on 11th May 2022, the total Ordinary dividend for the year will be 136.0 pence per share, an increase of 15% over the 118.0 pence per share for the prior year.

<u>Strategic Review</u>

Engineering with Purpose

Our Company Purpose supported by our strong culture and Values, robust business model and strategy continued to drive us forward in 2021. Against the backdrop of the disruptions caused by the ongoing global pandemic, the work we do to create a more efficient, safer and sustainable world has never been more important. Our teams have supported our customers across the globe, providing essential solutions which enable them to ramp-up their critical manufacturing and industrial processes to meet unprecedented demand growth.

This demand growth has been most significant in defensive sectors such as, Pharmaceutical & Biotechnology, Food & Beverage and Healthcare, which accounted for 50% of our Group sales in 2021. We remain a highly diversified Group selling into 12 core industry sectors, as well as multiple secondary industry sectors. Consistent with 2020, our largest sectors in 2021 were Pharmaceutical & Biotechnology and Food & Beverage, accounting for 27% and 19% of Group sales respectively. We continue to serve a wide and diverse range of customers with no single customer accounting for more than 1.5% of Group sales.

Self-generating growth

In line with our Group Purpose, we have a long track record of helping our customers to meet their efficiency and sustainability goals, through our direct sales model and breadth of products and solutions. This means we are uniquely positioned to continue supporting our customers, as they address the dual trends of increasing energy prices and the decarbonisation of industrial processes, through reducing both their energy costs and greenhouse gas emissions.

Our direct sales business model is highly effective at uncovering opportunities to improve the efficiency and effectiveness of our customers' processes. Our engineers often identify unrecognised needs and design bespoke solutions to meet those needs by 'walking our customer sites'. Our work to accelerate the implementation of our Digital strategy, including the acquisition of Cotopaxi, enables us to provide a physical and digital connection which extends our capability beyond 'walking the plant' to 'walking the data'.

As these self-generated solutions generally have a short payback period for the customer and are typically paid for from customers' operating budgets, they remain attractive even during challenging economic times. In addition to this, our solutions, which evolve in response to global trends and are influenced by voice of customer activities, help our customers to reduce their environmental impacts, improve product quality, provide safer working environments for their people and achieve regulatory compliance.

The total proportion of Group sales which are funded by our customers' operating budgets remains close to 85%, with the balance coming from customers' capital budgets. Our direct sales business model, diverse global and industry spread and our network of 2,000 sales and service engineers across 68 countries – unique in number and expertise amongst our competitors – has enabled our Group to continue outperforming during 2021.

We have six strategic themes designed to help us deliver self-generated growth that outperforms our markets. Our six strategic themes are:

- increase direct sales effectiveness through market sector focus
- develop the knowledge and skills of our expert sales and service teams
- broaden our global presence
- leverage research and development (R&D) investments
- optimise supply chain effectiveness
- operate sustainably and help improve our customers' sustainability

As we implement our strategy, we ensure that we have the right solutions, in the right places, at the right times and the highly skilled people with the expertise needed to provide industry-leading support to our customers.

Refreshing our strategies

Business Strategies

All three Businesses leverage our common strategic framework and business model to develop and refresh their own strategies.

In June 2021, Steam Specialties launched its refreshed strategy, Customer first^2 (Customer first squared), to colleagues across the Business, which comprises the leading product brands of Spirax Sarco and Gestra. The refreshed strategy builds on the Customer first strategy that has been in place since 2014. The strategy maintains a focus on prioritising attractive growth sectors and value-based selling to deliver Total Customer Solutions. Building upon customer insights, Customer first^2 also further embeds sustainability and digital as well as innovation and inclusivity within its eight strategic initiatives. It completes a trio of Business strategy refreshes, with Watson-Marlow and Electric Thermal Solutions having undertaken similar exercises in 2020. You can read more about our progress against these strategies in our Operating Review which begins on page 10.

Sustainability strategy
Another key development was the launch, in June, of our refreshed Group Sustainability Strategy, One Planet: Engineering with Purpose. It sets out our commitment to sustainability, as well as our roadmap to building a more sustainable future. Within the strategy, we have set ourselves some stretching targets to deliver climate and environmental action, customer sustainability, resilient supply chains and stronger communities. This includes achieving net zero in scope 1 and 2 greenhouse gas emissions by 2030 and net zero in scope 3 emissions by 2050. We have a clear roadmap to achieve our 2030 target, which includes sourcing or self-generating 100% of our electricity from renewable sources and converting our vehicle fleet to electric vehicles.

Inclusion, equity and wellbeing
During 2021, the Group has continued to attract, develop and retain the best talent in order to strengthen our organisational capabilities, enhancing our diversity through a focus on creating an inclusive and equitable working culture where all our colleagues can be themselves and achieve their full potential. The Group made 55 senior appointments during 2021, with just under half of those being internal movements or promotions. Women now account for 33% of our senior leadership roles and 40% of our Board members. We had a record 91% response rate to our third bi-annual employee engagement survey, with engagement scores up compared to previous years and above global benchmarks.

A highlight during 2021 was the development and subsequent launch of Everyone is Included, our Group plan for an inclusive, equitable and healthy organisation. The Plan includes ten Inclusion Commitments, which are a set of global minimum standards. Our Inclusion Commitments became effective on 1st February 2022 and include: a minimum of 16 weeks' paid leave for all new parents, whoever they are and however they become a parent; additional support for caregivers; support for colleagues who experience pregnancy loss; being a safe place for all lesbian, gay, bi, trans and queer or questioning people; proactively promoting better wellbeing and mental health as well as enabling our hybrid workforce to be at their best wherever they are working.

Enhancing organic growth through acquisitions
We remain committed to deliver organic growth through the disciplined implementation of our six strategic themes. Our Corporate (M&A) Strategy is designed to enhance our platform for continued organic growth through selected acquisitions that accelerate the implementation of our strategy. We continue to develop and assess a pipeline of potential acquisitions that expand our capabilities through new products, technologies and geographic coverage, while increasing our addressable market.

During 2021 we agreed the £12.8 million acquisition of Cotopaxi Limited, subsequently completed at the end of January 2022, which advances our journey of embedding digital enablement across the Group. This digitally-enabled, global energy consulting and optimisation specialist will accelerate Steam Specialties' objective to digitally enhance its customer bonding, generating further opportunities that support system uptime, reduce waste and increase efficiency.

Implementing our strategy
<u>Increase direct sales effectiveness through market sector focus</u>
Across our three Businesses we have been implementing sector specific growth programmes to generate demand, including the launch of new solutions and targeted campaigns. We also expanded our direct sales organisation, recruiting almost 200 sales and service engineers to support our global growth.

We continued to see the benefits of cross-selling initiatives between Electric Thermal Solutions (ETS) and Steam Specialties, particularly in North America, as existing customer relationships in Steam Specialties helped to deliver decarbonisation related orders for Chromalox.

Develop the knowledge and skills of our expert sales and service teams
We have continued to invest in the training and development of our sales and service engineers throughout 2021. Advanced training programmes were launched and adopted by engineers across our Businesses. We have been utilising our strength as a Group to advance our training offering, with Steam Specialties supporting ETS and Watson-Marlow with the development of their own Academy platforms.

During 2022, Steam Specialties will roll out a learning programme designed to support the effective integration of Cotopaxi's digital capability into our solutions selling organisation.

Broaden our global presence
The geographic expansion of our direct sales presence is a key element of our strategy, enabling us to increase our coverage and access to customers. In 2021, this has been achieved through a combination of increasing headcount in existing territories across all Businesses, expanding into new countries, as well as widening the geographic reach of ETS through investment in resources in Asia Pacific. We opened one new Operating Company for Gestra in France during 2021 and Watson-Marlow successfully started trading from its Operating Company in the Czech Republic.

Our investment in a new manufacturing facility in Massachusetts (USA) for Watson-Marlow is also broadening our regional manufacturing footprint as well as expanding our capacity. Once operations begin in late 2022, this state-of-the art manufacturing facility will better serve the needs of our customers in the Americas, across our portfolio of products and sectors.

Leverage our research & development (R&D investments)
Despite the continued challenges of remote working our teams launched 37 new product, service, or solution offerings during the year across Steam Specialties, ETS and Watson-Marlow. Steam Specialties and ETS in particular have been instrumental in driving up the Group's Product Vitality, a measure which compares total revenues from new products, services or solutions introduced in the previous five years to overall Group revenue.

The Thermal Solutions Synergy project, which is a collaboration between Steam Specialties and ETS, is continuing to develop and test solutions for the decarbonisation of steam generation and other industrial processes. Encouraging progress was achieved during customer trials of our thermal energy storage system, as well as live testing of a retrofit system that decarbonises fossil-fuelled industrial steam boilers utilising electric solutions with both Low and Medium Voltage technology.

Watson-Marlow launched its Qdos Conveying Wave Technology (CWT) product range globally in 2021. This revolutionary pump features a patented pumping principle that includes all the benefits of a peristaltic pump, with a significantly longer service life and broader range of process chemicals. It also eliminates expensive ancillary equipment and better protects the pump operator from exposure to chemicals. In one recent customer application, the extended lifespan of the pump delivered a 250% improvement for a water purification plant company in France.

Optimise supply chain effectiveness
With strong demand growth experienced across our Group, combined with disruption to the global supply chain, our Businesses responded to mitigate the impact on our On-Time-To-Request (OTTR) customer service measure. While lower than prior year, the performance was pleasing in light of the

challenges faced by the teams. We continue to focus on increasing our supply chain agility to compress lead times and enable improved customer service.

In Steam Specialties, the reorganisation of our 11 global supply sites under common leadership has improved collaboration and opportunities for growth enablement working with our sales and business development teams. In 2021, despite the persistent economic and supply chain uncertainties generated by the global pandemic, we did not deviate from our planned investments to modernise our manufacturing equipment as part of our Future Factory initiative. These investments in equipment have resulted in greater flexibility, increased automation and higher output, which has better equipped the Business to respond to increased demand from customers.

During 2021, we also completed construction of three new manufacturing facilities. The team at Aflex Hose, which is part of Watson-Marlow, completed the move into their new offices and state-of-the-art 17,000m^2 factory in Yorkshire (UK), which increased their production capacity by 70%. In Normandy, (France), work was completed on the new Thermocoax 'One' manufacturing facility which combined four previous sites into one purpose-built, 13,000m^2 factory and associated offices. Construction work was also completed on the new BioPure facility for Watson-Marlow in Portsmouth (UK). When the internal fit out works are completed early in 2022, the production capacity of BioPure will increase significantly, allowing us to meet growth in demand.

Operate sustainably and help improve our customers' sustainability

Our products and solutions have always enabled our customers to operate both more efficiently and more sustainably. We calculated the environmental benefits of 12 Steam Specialties product ranges sold in the year, which we estimate resulted in savings per annum of 96.1 million m^3 of water, 250 million GJ of energy and 18.2 million tonnes of CO_2 in 2021. During the year we completed Life Cycle Assessments on two of Watson-Marlow's product types, which will be extended to other product types in 2022. We also combined the technology capabilities from across our Group to develop innovative heating solutions for the decarbonisation of steam generation and other industrial processes.

We made significant progress in the implementation of our One Planet Sustainability strategy, including our journey towards net zero. At the end of the year more than 30% of our Group's energy was being sourced through green contracts and work began to decarbonise our largest Steam Specialties manufacturing facility. By the end of 2021, our market-based greenhouse gas (GHG) emissions (which take account of green energy contracts) were 16% lower than our 2019 baseline, consistent with our target of achieving a 50% reduction by 2025. This represents a 23% reduction over two years in our carbon emissions intensity, which is market-based carbon emissions relative to inflation adjusted sales at constant currency. We also signed up to two important initiatives, Race to Zero and Business Ambition 1.5^{o} C, to guide our activities in line with climate science. The disclosure insight charity, CDP, formerly known as the Carbon Disclosure Project, increased our environmental score from B to A- which takes us into the leadership category.

To help meet our biodiversity offset target of five times our operational footprint by 2025, we partnered with the World Land Trust, making our first offset investment by contributing to a new nature reserve in Argentina.

We were very pleased to establish the Spirax-Sarco Engineering Group Education Fund in late 2021, contributing an initial £1 million donation as part of our commitment to remove barriers to education and improve diversity in Engineering. In the six months from launch to the end of 2021, One Planet has become very well embedded in our Group and we are proud of the way in which our teams have embraced the strategy, with all of our Operating Companies having developed at least one community engagement project during 2021.

Operating Review

	2020	Exchange	Organic	Acq'n & disposal	2021	Organic	Reported
Revenue	£1,193.4m	(£41.0m)	£192.1m	-	£1,344.5m	+17%	+13%
Adjusted operating profit	£270.4m	(£11.1m)	£81.0m	-	£340.3m	+31%	+26%
Adjusted operating profit margin	22.7%				25.3%	+280 bps	+260 bps
Statutory operating profit	£249.0m				£320.9m		+29%
Statutory operating margin	20.9%				23.9%		+300 bps

Market environment

Global industrial production growth[1] (IP) was 7.6% in 2021, compared to 4.1% contraction in 2020 and is now higher than the pre-COVID-19 pandemic level of 2019. While all regions recovered strongly, Asia Pacific was the only major region where IP in 2021 was materially above pre-pandemic levels, driven mostly by strong IP in China and Korea. IP for the Europe, Middle East & Africa region in 2021 closed marginally ahead of 2019, while IP in both North America and Latin America remained below pre-pandemic levels.

	IP Performance 2021	**IP Performance 2020**
Europe, Middle East & Africa	+6.5%	-6.2%
of which, Europe	*+8.2%*	*-7.2%*
North America	+5.4%	-7.3%
Latin America	+6.2%	-7.0%
Asia Pacific	+8.0%	-1.2%
of which, China	*+8.2%*	*+2.5%*

IP was very strong in the first half at 11.5%, against a weak comparator in 2020 that reflected the worst of the economic impacts of the pandemic. The 4% growth in the second half was below earlier forecasts, with lower month-on-month sequential growth rates reflecting the impacts of global supply chain challenges on factory output.

In our largest sectors, Pharmaceutical & Biotechnology and Food & Beverage, which accounted for 46% of Group sales in 2021, IP was 13.6% and 4.0% respectively. In the Oil & Gas sector which accounted for 5% of Group sales, IP was 4.1% having contracted 6.7% in 2020.

Over the past three months, forecasts[1] for global industrial production growth (IP) in 2022 have ranged between 4.0% and 4.4%, reflecting the ongoing global supply chain disruptions but not yet the unfolding geopolitical tensions.

[1] Source for industrial production data: Oxford Economics, February 2022

Summary of progress in 2021

Sales

Group sales were up 13% to £1,344.5 million (2020: £1,193.4 million) and 17% up on an organic basis, the difference being due to a negative foreign exchange impact of over 3%. Organic sales growth more than offset the 3% reduction experienced in 2020, with Group sales well above the pre-pandemic level of £1,242.4 million, demonstrating the resilience of our business model and strategies, as well as the quality of execution by our teams.

The Steam Specialties Business, which accounted for 56% of Group revenue in 2021, experienced strong growth in all regions, supported by a recovery of IP as customers resumed maintenance activity and capital expansion projects that were postponed in 2020. Sales of £754.9 million were up 9% and 12% up on an organic basis, with growth in demand outstripping sales and leading to an expansion of the order book carried forward into 2022.

The Electric Thermal Solutions (ETS) Business, which accounted for 14% of Group revenue in 2021, delivered sales of £181.3 million, up 2% or 7% up organically against 2020. Demand growth was ahead of Steam Specialties demand growth, after adjusting for the record US$14 million order from the US Navy in 2020. Demand for Chromalox's decarbonisation-related solutions and from Thermocoax's customers in the Semiconductor sector was particularly strong. As demand growth was significantly ahead of sales growth, the Business ended the year with a record order book carried forward into 2022. Sales were impacted by disruptions in the global supply chain and delays in delivering operational improvements at two of our manufacturing facilities in Chromalox.

Watson-Marlow, which accounted for 30% of Group revenue in 2021, delivered record sales of £408.3 million, 27% above 2020 and 32% up on an organic basis. This growth was supported by exceptional demand from the Pharmaceutical & Biotechnology sector, which accounted for almost 60% of Watson-Marlow's sales in 2021, as well as growth strongly above IP in the Process Industries sector. Manufacturing capacity was ramped-up significantly during the year and would have been higher if not for the impact of global supply chain disruptions. Demand growth exceeded sales, leading to the largest expansion in order book of any of our Businesses.

Adjusted operating profit

Group adjusted operating profit was up 26% to £340.3 million and 31% up on an organic basis, the difference being due to a negative foreign exchange impact marginally above 4%.

In Steam Specialties, adjusted operating profit of £188.7 million was up 22% compared with 2020 and 27% up on an organic basis, with the benefits of operational gearing partially offset by a significant increase in revenue investments to support future growth.

ETS delivered an adjusted operating profit of £24.0 million, up 3% on an organic basis but 2% down on a reported basis, due to a strong currency headwind.

Watson-Marlow's adjusted operating profit was up 40%, and 46% up organically compared with 2020, notwithstanding continued revenue investments and expansion of manufacturing capacity.

Adjusted operating profit margin

The Group adjusted operating profit margin of 25.3% was up 260 bps, a record level for the Group. On an organic basis, the adjusted operating profit margin improved by 280 bps. Margin expansion was driven by strong growth in sales, with the benefit of operational gearing partially offset by the ramp-up of revenue investments to support future growth, which mostly impacted the second half of the year. The adjusted operating profit in 2021 does not reflect a full-year of cost of these investments. Had we incurred a full-year of cost, the Group's adjusted operating profit margin would have been lower by less than 200 bps.

Within Steam Specialties, the adjusted operating profit margin grew 280 bps to 25.0%, and 290 bps on an organic basis. For ETS, the adjusted operating profit margin was 13.2%, down 60 bps on both a reported and organic basis. Watson-Marlow's adjusted operating profit margin was up 330 bps to 36.7%, driven by a strong 340 bps organic margin expansion.

ETS adjusted operating profit margin was lower in 2021, due to lower than expected shipments from our manufacturing facility in Ogden (USA) and continued losses in our Soissons (France) manufacturing facility, as well as increased revenue investments and costs to support operational improvements. In the Americas, which represents over 75% of Chromalox sales and experienced the highest demand growth, the adjusted operating profit margin has reached 20%. Thermocoax's adjusted operating profit margin was higher in 2021, mostly as a result of continuing strong demand for semiconductors.

Statutory operating profit and margin
Statutory operating profit of £320.9 million was up from £249.0 million in 2020 and the statutory operating profit margin of 23.9% was up 300 bps (2020: 20.9%). The drivers of the increase in statutory operating profit and statutory operating profit margin are as explained in the adjusted operating profit sections above, as well as the reduction in acquired intangible amortisation to £21.4 million (2020: £26.6 million) and a lower defined benefit pension credit of £2.0 million (2020: £10.5 million).

Outlook
Our robust business model and disciplined execution of our strategies have underpinned the resilience of our performance throughout economic cycles, so we remain confident in our ability to navigate the growing uncertainties ahead. If exchange rates at the end of February were to prevail for the remainder of the year, there would be a less than 1% headwind impact on 2021 sales and adjusted operating profit as reported. Movements in exchange rates are often volatile and unpredictable, especially given the current geopolitical uncertainties, therefore the actual impact could be significantly different.

Over the past three months, forecasts[1] for global industrial production growth (IP) in 2022 have ranged between 4.0% and 4.4%, reflecting the ongoing global supply chain disruptions but not yet the unfolding geopolitical tensions. Against these IP forecasts, for most of the Group's organic revenue streams we currently anticipate organic sales growth well above IP in 2022, supported by record order books in all three of our Businesses. In Watson-Marlow's Pharmaceutical & Biotechnology sector, which accounted for almost 60% of their sales in 2021, we anticipate very strong organic sales growth around 20%. Achieving these growth levels continues to be dependent on each Business expanding its manufacturing capacity and mitigating supply chain constraints.

During 2021, we accelerated our revenue investments to support future organic growth and improve our sustainability performance. However, these revenue investments had a lower impact on the first half performance, which drove the record adjusted operating profit margin of 2021. This is evidenced by the very high 51% drop-through from increased organic sales to adjusted operating profit in the first half, compared to a more typical 34% organic adjusted operating profit drop-through in the second half of the year. We estimate the full-year effect of these revenue investments would have reduced the Group's 2021 adjusted operating profit margin by less than 200 bps. While the full-year impact of these revenue investments will reduce the 2022 adjusted operating profit organic growth rate, we currently anticipate the adjusted operating profit margin in 2022 will remain comfortably above pre-pandemic levels.

We anticipate that cash conversion will be lower than our historical levels of around 90%, as we step up capital investments to between 6% and 7% of sales and increase working capital in line with revenue.

Steam Specialties

	2020	Exchange	Organic	Acq'n & disposal	2021	Organic	Reported
Revenue	£694.1m	(£21.8m)	£82.6m	-	£754.9m	+12%	+9%
Adjusted operating profit	£154.3m	(£5.7m)	£40.1m	-	£188.7m	+27%	+22%
Adjusted operating profit margin	22.2%				25.0%	+290 bps	+280 bps
Statutory operating profit	£157.8m				£186.8m		+18%
Statutory operating margin	22.7%				24.7%		+200 bps

Market overview
Global Industrial Production growth (IP) was 7.6% in 2021, more than recovering the 4.1% contraction of 2020.

In Europe, Middle East and Africa, IP was 6.5% in 2021, compared to a 6.2% contraction during 2020. In Asia Pacific, IP was 8.0% in 2021, following a 1.2% contraction in 2020. North America was 5.4% and Latin America 6.2% in 2021, with IP in most countries across these regions failing to recover to pre-pandemic levels.

The Food & Beverage sector, representing 28% of Sales, grew at 4.0% in 2021. The OEM (19% of sales) and Pharmaceutical & Biotechnology (13% of sales) sectors grew at 15.3% and 13.6% respectively.

Progress in 2021
Steam Specialties, which comprises the two leading product brands of Spirax Sarco and Gestra, operates across the three geographic divisions: Europe, Middle East and Africa (EMEA), Asia Pacific and the Americas.

Steam Specialties' sales of £754.9 million were up 9% in 2021 or 12% up organically. The Business experienced strong demand growth across all regions, above the growth rate of sales. Demand growth was supported by a recovery of global IP with customers resuming maintenance activities and capacity expansion projects that were postponed in 2020.

The dual effect of the strong economic recovery and global supply chain shortages had an impact on the Business in 2021. This included labour shortages caused by COVID-19 isolation requirements, reduced availability of some materials and freight disruptions. The strong demand growth and the impact of these supply chain constraints was reflected in an expansion of the order book at the end of 2021, despite the ramp-up of activities at our manufacturing facilities to meet the increased demand. As a consequence of these factors and despite the mitigating actions taken, Steam Specialties' customer service metric, On-Time-To-Request (OTTR), suffered a slight decline compared to 2020.

In EMEA, Steam Specialties achieved 10% organic sales growth, more than offsetting the 7% contraction experienced in 2020. Across the four main markets of the UK, Germany, France and Italy, which together account for over 55% of sales in EMEA, IP was relatively modest with the first three of those countries recovering almost half their 2020 IP decline. In this context, Steam Specialties performed strongly, growing sales between 6% and 11% across those four countries. Demand in most EMEA countries exceeded growth in sales, reflecting strong IP and the challenges of supply chain disruptions during the second half of 2021.

In Asia Pacific, 13% organic sales growth was driven by the excellent performance of China that grew 28%, supported by strong demand from the Pharmaceutical & Biotechnology sector and sales to customers who serve the growing battery production market. In Korea, our second largest market in the region, sales were down 12% compared to 2020 despite demand being flat. This was a reflection of the higher mix of larger projects shipped in 2020, which experienced a slower recovery than mid-size projects in 2021, especially in the Oil & Gas sector.

In the Americas, 17% organic sales growth represented a strong performance against a backdrop of regional IP that did not fully recover the contraction of 2020. In North America, which accounts for more than 60% of sales in the Americas, growth was particularly strong at 13%. Latin America was the fastest growing region of 2021, driven by outstanding mid-teens real terms sales growth in Brazil and Argentina, which account for over 60% of Steam Specialties' Latin American sales.

Adjusted operating profit of £188.7 million was up 22% or 27% up organically. At 25.0%, the adjusted operating profit margin was up 280 bps or 290 bps up organically. Statutory operating profit of £186.8 million was up 18% from £157.8 million in 2020.

Steam Specialties adjusted operating profit margin expanded substantially in 2021, reflecting strong sales growth and the benefits of operational gearing. We continued to invest significantly to support our future revenue growth, with an expansion in sales-related headcount and new product development, as well as digital and sustainability initiatives. These investments were ramped-up during 2021 and more heavily weighted to the second half of the year. As a result, the adjusted operating profit in 2021 does not reflect the full-year impact of these investments. Had we incurred a full-year cost, Steam Specialties adjusted operating profit margin would have been lower by around 200 bps.

Strong demand coupled with supply chain shortages also resulted in underlying input cost inflation, consistent with trends being experienced globally. The impact of these cost increases was mitigated through our proactive price management practices.

Business strategy update
In June 2021, Steam Specialties launched its refreshed strategy, Customer first^2 (Customer first squared). This refreshed strategy builds on the Customer first strategy that has been in place since 2014 and expands on key areas such as customer insight, sustainability, innovation, digital and inclusivity. The Business remains focused on the most attractive industries where we can deliver most value to customers and drive self-generated growth.

Following the acquisition of Gestra in 2017, Steam Specialties has pursued a sector-driven dual brand strategy, while implementing our business model and Customer first strategy within Gestra to drive higher growth and improved adjusted operating profit margins. Since 2019, Gestra's sales growth performance has remained in line with the Spirax Sarco brand, while adjusted operating profit margins continued improving in line with our acquisition plans and reaching the 20% threshold.

In January 2022, Steam Specialties completed the acquisition of Cotopaxi Limited a digitally-enabled global energy consulting and optimisation specialist, for £12.8 million, to further accelerate implementation of our Digital strategy. Cotopaxi will enhance our ability to connect to customers' systems and analyse their data, generating further opportunities and solutions that support system uptime, reduce waste and increase efficiency.

We work closely with our customers to understand and support their sustainability goals. Recognising the critical role that steam plays in industrial processes globally, we launched the 'Natural Technology' campaign in 2021. This campaign reinforces the natural, clean properties of steam and demonstrates its importance to processes such as sterilisation, cooking, heating and cleaning. The ability to decarbonise the process of raising steam is critical to building a more sustainable future. Our 'Thermal Solutions Synergy' team, comprised of colleagues from Steam Specialties and Electric Thermal Solutions (ETS), have developed and are continuing to test innovative new solutions that use both Low Voltage and our patented Medium Voltage technologies to decarbonise the generation of steam with minimal impact to our customers' operations.

Alongside our drive to help customers meet their sustainability goals, we are also taking steps to meet our own ambitious target of achieving net zero scope 1 and 2 greenhouse gas emissions by 2030. Work has begun at our UK manufacturing site in Cheltenham, to deploy our innovative decarbonisation solutions for the electrification of our gas-fired boilers. Upon completion of this project in late 2023, we will reduce our site's scope 1 and scope 2 emissions, with our electricity needs being supplied via green energy contracts.

We continue to invest in new product development across Steam Specialties and released 19 new product offerings throughout 2021 to support the efficient use and control of steam. These included development of the next phase of our Boiler House control range, developed for Spirax Sarco using Gestra technology, as well as the M16i OEM Ball Valve range for the rapidly growing Original Equipment Manufacturing (OEM) market in China. Technology from our product brand Hiter, which is based in Brazil and was acquired by Steam Specialties in 2015, has been used for the first time in a global product range of Variable Area Desuperheaters, which helps customers with the efficient use and control of superheated steam.

We extended our range of clean steam products for Pharmaceutical & Biotechnology and Food & Beverage markets, including Clean Steam Generators, as well as launching a Steam Quality Training Programme for customers.

We also introduced a new range of control valve positioners, used widely in our solutions and packages across all sectors, as well as a controls system upgrade for the Spirax Sarco EasiHeat™ Compact Heat Transfer Solution, offering improved energy efficiency over previous product generations.

Against the backdrop of record demand for our products and solutions, we made improvements at a number of our manufacturing sites. These improvements included the consolidation of two manufacturing locations in Italy and outsourcing production of specific products as part of our Future Factory investment programme, which is an ongoing commitment to equipment modernisation in order to increase our manufacturing capacity and efficiency. This resulted in a better alignment of the combined operation to future market demand, following the introduction of new innovations such as our sector-specific ranges of Clean Steam Generators.

In our UK and Brazilian manufacturing facilities, the introduction of new machines is driving increased flexibility and automation, enabling faster growth and improved response to changes in customer demand. The Future Factory programme continued throughout the pandemic and supported an increase in manufacturing capacity in 2021.

We also continued to invest in our direct sales capability and expanding our geographic reach, with Gestra France beginning trading in January 2021. Investment was approved to establish a stronger sales presence across Africa and the Middle East with a substantial step up in the recruitment of direct sales engineers across that region. Our self-generated sales capability is underpinned by a strong focus on training delivered through our Steam Academy. During the year, we expanded the training available to support our engineers with their technical development through programmes of learning with increasing degrees of difficulty.

Business outlook
Over the past three months global industrial production growth (IP) forecasts[1] for 2022 ranged between 4.0% and 4.4%, reflecting ongoing global supply chain disruptions but not yet the unfolding geopolitical tensions. We currently anticipate that Steam Specialties' organic sales will continue to grow ahead of global IP forecasts in 2022.

We also anticipate that in 2022, the adjusted operating profit organic growth rate will be lower than the sales organic growth rate, reducing the adjusted operating profit margin. The full-year impact of our revenue investments in 2021, which we estimate would have reduced Steam Specialties' 2021 adjusted operating profit margin by around 200 bps, will reduce our adjusted operating profit growth in 2022. While we expect the benefits of operational gearing from increased sales to be partially offset by the full-year impact of the 2021 revenue investments, we currently anticipate the 2022 adjusted operating profit margin will remain slightly above pre-pandemic levels.

Electric Thermal Solutions

	2020	Exchange	Organic	Acq'n & disposal	2021	Organic	Reported
Revenue	£178.0m	(£7.9m)	£11.2m	-	£181.3m	+7%	+2%
Adjusted operating profit	£24.6m	(£1.2m)	£0.6m	-	£24.0m	+3%	-2%
Adjusted operating profit margin	13.8%				13.2%	-60 bps	-60 bps
Statutory operating profit	£4.8m				£11.1m		+131%
Statutory operating margin	2.7%				6.1%		+340 bps

Market overview
The geographic footprint of the Electric Thermal Solutions (ETS) Business differs from Steam Specialties and Watson-Marlow, with over two-thirds of revenue generated in the Americas and less than 10% generated in Asia Pacific. ETS also has a greater weighting of sales to the Oil & Gas, Power Generation and Semiconductor sectors than Steam Specialties, plus a lower weighting to the Food & Beverage and Pharmaceutical & Biotechnology sectors.

Chromalox, which accounts for three-quarters of ETS revenues, generates over 75% of its revenue in North America and therefore has a higher exposure to the USA where IP was 5.5% in 2021. The Oil & Gas sector, which accounts for 14% of Chromalox sales grew at 4.1% during the year, while Buildings is the second largest sector at 13% of sales.

Our customers' focus on the decarbonisation of their industrial processes and heating systems to reduce their own greenhouse gas emissions, continues to drive demand for Chromalox's products and solutions. Cross-selling opportunities referred by Steam Specialties have also delivered additional demand for Chromalox, particularly in municipal heating applications in North America.

Almost half of Thermocoax's sales were in EMEA, where IP was 6.5%. The Semiconductor sector now accounts for over 40% of Thermocoax sales, having grown 7% during the year. The drive to 7nm and smaller architecture continues to create opportunities for our lithography and atomic layer deposition solutions.

Progress in 2021
ETS experienced strong overall demand growth, ahead of Steam Specialties demand growth, after adjusting for the record US$14 million order from the US Navy, the largest order in our Group's history.

ETS sales were up 2% to £181.3 million or 7% up on an organic basis, with the difference due to currency headwinds. ETS experienced demand growth significantly ahead of sales growth, which led the Business to end the year with a record order book carried forward into 2022. Sales were impacted by disruptions in the global supply chain, a tight labour market in the USA and delayed delivery of operational performance improvements in two of Chromalox's manufacturing facilities.

Chromalox's 12% sales growth in the Americas reflected strong demand for bespoke solutions supporting customers' decarbonisation. Outside of the Americas, demand grew at a lower rate due to a slower recovery of larger projects in the Oil & Gas sector, which remains below pre-pandemic levels. Thermocoax's sales, which grew in 2020 despite pandemic effects, continued to benefit from strong demand in the Semiconductor sector.

Adjusted operating profit of £24.0 million, was up 3% on an organic basis but 2% down on a reported basis due to a strong currency headwind. Statutory operating profit of £11.1 million was up 131% from £4.8 million in 2020.

ETS adjusted operating profit margin was 13.2%, down 60 bps on both a reported and organic basis. Chromalox's adjusted operating profit margin was lower in 2021, partly driven by increased revenue investments in sustainability, new product development and to support operational improvements. Thermocoax's adjusted operating profit margin was higher in 2021, supported by sales growth and the benefits of operational gearing.

In the Americas, which represents over 75% of Chromalox sales and experienced the highest demand growth, the adjusted operating profit margin reached 20%, reflecting the scale of the business in that region. In EMEA, which represents around 15% of Chromalox sales, the reorganisation of the Chromalox Soissons (France) manufacturing facility during 2020 delivered the expected increase in shipments to customers in 2021, albeit with continued losses. The Chromalox EMEA Sales Director retired at the end of the year and was succeeded by an experienced Sales Director from our Steam Specialties Business, who will focus on accelerating sales growth and improving EMEA price management practices in a manner consistent with the rest of our Group. As these price management practices become embedded, we will be able to better assess the adjusted operating profit margin outlook of the manufacturing operations at Soissons.

During 2021, shipments from our manufacturing facility in Ogden (Utah, USA) were slightly above 2020, but fell short of our expectations for the year. We estimate this sales shortfall impacted the ETS adjusted operating profit margin by over 200 bps. Ogden is currently capacity constrained as it transitions to focus on the manufacture of both Low Voltage and patented Medium Voltage technology industrial heating solutions, supporting the decarbonisation of buildings and industrial processes. This capability remains vital to delivering our strategy for ETS.

In order to step up our shipment levels at Ogden, we continue to invest in increased staffing and specialist skills, as well as further operational improvements which include the re-engineering of manufacturing processes to reflect the more complex and bespoke engineered solutions delivered by the plant, while relocating higher volume standard products to our manufacturing facility in Nuevo Laredo (Mexico).

Business strategy update

ETS carried out a strategy refresh during 2020, resulting in the launch of the Engineering Premium Solutions (EPS) strategy. An important component of this strategy is the drive towards 'Total Customer Solutions' and during 2021 we strengthened our business development function and increased our focus on new product innovation, with demonstrable technological advantages and quantified sustainability benefits.

ETS is evolving its solutions in electrification, decarbonisation and sustainability which remain important growth drivers for the Business as it builds a significant pipeline of opportunities. Chromalox is already the process heating technology partner for several large energy storage solutions providers and we are engineering a full-scale commercial thermal energy storage system for a major European renewable energy company, utilising more than 30MW of electric process heating.

Additionally, we are working with a leading power company in the USA to develop a 5MW molten salt storage system for a new type of highly efficient power cycle. Chromalox's patented DirectConnect Medium Voltage (MV) technology provides the innovative step necessary to enable a grid-scale thermal energy storage system to operate effectively. Our DirectConnect MV technology is part of a solution for McGill University in Canada, which has an energy requirement equivalent to 13,000 homes, helping them reduce scope 1 carbon emissions from their downtown powerhouse by an expected 30%.

By combining our core capabilities with Steam Specialties, we have been able to develop synergies within our thermal energy management portfolio. This has enabled the 'Thermal Solutions Synergy' team to design new industry-leading products that deliver significant sustainability benefits for customers. In 2021, the team successfully installed and started-up the first customer trial of a steam thermal energy storage system, with the second being installed for start-up in 2022. This solution is a dynamic and flexible thermal storage system that converts electrical energy into steam for use 'on demand'. When combined with a renewable energy source or via green energy contracts, it supports our customers' aspirations to decarbonise their steam generation. Prototypes of different scales of the thermal energy storage systems have also been built and are being tested.

A retrofit boiler system that allows for the in-place conversion of fossil-fuel-fired industrial steam boilers into electric steam boilers with minimal disruption to the customer's processes has also been developed and tested. This system eliminates scope 1 carbon emissions from the steam generation process, as well as reducing scope 2 carbon emissions when coupled with renewable power generation sources, improving the sustainability of our customers' operations.

ETS delivered 11 new product introductions to the market in 2021. For Thermocoax, these included a new chuck for the Semiconductor market, a heating plate used during the process of atomic layer deposition, with three heating zones delivering thermal homogeneity, as well as a tantalum heating element for the Aerospace market that can withstand temperatures of up to 1600°C.

A project to consolidate Thermocoax's four existing manufacturing sites in Normandy (France) into a new purpose-built manufacturing and office facility was completed as planned in 2021. Completion and handover of the building took place in Q3 and a carefully planned and phased transition plan for the sites was implemented in Q4 with minimum disruption to operations and customers. Production of orders from the new site began in December 2021.

We have continued to identify opportunities within ETS to leverage its position as part of our Group by adopting best practice from other parts of the organisation. We have identified a new leader for Chromalox EMEA from within the Group and have adapted existing 'go-to-market' tools to support our organic growth and sector focus. In 2021, we launched our revised go-to-market strategy in the Americas, optimising the number of accounts assigned to individual direct sales engineers in order to enable them to spend more time with existing and new customers, identifying their needs and customising solutions. We will be rolling out this approach in EMEA and Asia Pacific during 2022.

We are also investing in our self-generated sales capability by developing the skills and knowledge of our expert engineers through the ETS Academy. The Business is fully utilising the virtual and visual assets already available in the Steam Specialties Academy to provide a rich and immersive experience for our direct sales teams and end user customers.

Business outlook
Electric Thermal Solutions ended the year with a record order book that reflects the strong demand growth of 2021. In 2022, we anticipate Electric Thermal Solutions sales will increase at an organic growth rate above Steam Specialties, as we continue to address operational constraints and ramp-up our manufacturing capacity. As a result of the operational gearing from increased sales, we anticipate an increase in the adjusted operating profit margin in 2022.

Watson-Marlow

	2020	Exchange	Organic	Acq'n & disposal	2021	Organic	Reported
Revenue	£321.3m	(£11.3m)	£98.3m	-	£408.3m	+32%	+27%
Adjusted operating profit	£107.3m	(£4.2m)	£46.9m	-	£150.0m	+46%	+40%
Adjusted operating profit margin	33.4%				36.7%	+340 bps	+330 bps
Statutory operating profit	£102.2m				£145.4m		+42%
Statutory operating margin	31.8%				35.6%		+380 bps

Market overview
Watson-Marlow also benefitted from a recovery in global Industrial Production growth (IP), similar to Steam Specialties, albeit with a geographic footprint of sales that is more weighted to the Americas and less weighted to Asia Pacific.

The Pharmaceutical & Biotechnology industry, Watson-Marlow's largest sector, has historically grown at an annual rate between 12% and 14%, while Watson-Marlow's sales to this sector have historically grown close to 20% per annum. During 2021, the sector continued to experience exceptional growth given the industry's role in the development and production of COVID-19 vaccines. Watson-Marlow also benefitted from the strong recovery in IP through its sales to the Process Industries sector.

Progress in 2021
We have continued to see exceptional demand from our Pharmaceutical & Biotechnology customers, as well as strong demand growth in the Process Industries sectors, strongly above IP. Demand exceeded our ability to deliver shipments in some of our manufacturing plants, despite our significant investments to expand capacity, leading to a record order book being carried forward into 2022.

Watson-Marlow sales were up 27% to £408.3 million on a reported basis and 32% up on an organic basis. Sales to the Pharmaceutical & Biotechnology sector grew 43% and the sector now accounts for almost 60% of Watson-Marlow's total sales, while sales to the Process Industries sector grew well ahead of global IP. During 2021, we ramped up activity to meet demand despite disruption to global supply chains and shortages of some raw materials and key components, increasing shipments from BioPure (UK) and Falmouth Pumps and Tubing (UK) by over 50% and 35%, respectively.

Watson-Marlow's adjusted operating profit was up 40% to a record £150.0 million, due to sales growth and the benefits of operational gearing. Organically, adjusted operating profit was up 46% due to a strong currency headwind, reflecting the strengthening of sterling and our significant manufacturing footprint in the UK. At 36.7%, the adjusted operating profit margin was up 330 bps, or 340 bps up on an organic basis. Statutory operating profit was up 42% from £102.2 million in 2020 to £145.4 million in 2021.

During 2021, we continued to invest significantly to support our future revenue growth, with an expansion in manufacturing capacity, sales-related headcount, new product development, as well as digital and sustainability initiatives. Investments were ramped-up during 2021 and more heavily weighted to the second half of the year. As a result, the adjusted operating profit in 2021 does not reflect the full-year impact of these investments, which enhanced the adjusted operating profit margin by over 200 bps.

Business strategy update

Strategy25 is Watson-Marlow's five-year organic growth strategy, building momentum through ten strategic initiatives which are led and supported by team members across the Business. Through Strategy25 we are targeting sustainable growth that outperforms our markets.

We continued to invest in our Business to support future growth and better serve the needs of our customers, through the recruitment of over 130 people in direct sales roles. Our newest operating company in the Czech Republic began trading at the start of 2021 and also serves Slovakia. We have developed a new Sales Engineer Training Curriculum that is sector specific and will encompass a 12-month training programme, supported by Sector Specific Training Hubs.

In response to exceptional demand from the Pharmaceutical & Biotechnology sector, we have increased both short and long-term capacity at our existing facilities, including BioPure, Falmouth Pumps and Tubing and Flexicon sites. A new building close to our UK manufacturing site in Falmouth was leased to relocate warehousing and new product development activities. This freed up space for manufacturing expansion within our current site to meet increased demand. During the third quarter, we installed a third tubing line and associated clean room for Falmouth Tubing, anticipating further customer demand in 2022. Manufacturing cell capacity for pump assembly was supported by the recruitment of additional staff.

Construction of the new BioPure site at Dunsbury Park in Portsmouth (UK) has been completed and the internal fit out is progressing well. The project remains on schedule for first deliveries to customers by the end of the first quarter of 2022. In 2021, we increased the total project budget to £37 million to increase the number of moulding machines from 10 to 24 and increase cleanroom capacity, which will allow us to more than double the existing output and meet significant growth in demand.

In the USA, plans for our state-of-the-art greenfield manufacturing facility in Massachusetts are well advanced and running to schedule. The build phase of the 14,000m^2 facility began in October 2021, with first production due in late 2022. The site will incorporate a suite of eight ISO14644-1 Class 7 cleanrooms, warehousing and offices, with space for two further cleanrooms within the initial footprint. This new facility will deliver products from across our portfolio of Watson-Marlow brands and strengthen the support we provide to customers in the Americas and across all our sectors. As anticipated there has been an escalation in expenditure for this project due to the sharp inflation of raw materials and commodity costs within the construction sector.

Watson-Marlow launched 7 new products in 2021. Following a soft launch in the first half of the year, the Qdos CWT was fully launched to the market in the second half. This product features a revolutionary new pumphead called the ReNu 30 CWT, which utilises Conveying Wave Technology (CWT) and fits onto our existing range of Watson-Marlow Qdos pumps. The patented technology pumphead delivers superior accuracy and chemical resistance for metering and dosing applications, establishing the next level of high performance for our industry. It is an evolution in long-life chemical metering and expands our addressable market downstream into sectors requiring higher flow, pressure and enhanced chemical resistance.

A new peristaltic filling machine, the Flexicon PF7+, designed for high accuracy aseptic filling in critical applications for zero waste was launched to the Pharmaceutical & Biotechnology market, as well as a new grade of BioPure tubing for transfer applications.

The Watson-Marlow Maxthane FDA and EC1935 food grade tubing and the MasoSine Certa Clean In Place (CIP)/Clean Out of Place (COP) pump were all launched for the Food & Beverage sector in 2021, while the thin-walled Watson-Marlow TPU tubing for handling Aliphatic hydrocarbons was also launched for the Industrial sector. The new MasoSine Certa pump design removes the operational requirement to repeatedly strip down pumps to clean, or prove cleanliness, between batch runs and has opened up additional applications for the product.

Business outlook

During 2021, Watson-Marlow experienced exceptional demand growth from customers in the Pharmaceutical & Biotechnology sector, ahead of sales growth, resulting in a record order book at the end of the year. Given the strong underlying demand and a larger opening order book, we anticipate around 20% organic sales growth to the Pharmaceutical & Biotechnology sector in 2022. Across Watson-Marlow's Process Industries, we currently anticipate organic sales growth to be well above global industrial production growth.

We also currently anticipate that in 2022, the adjusted operating profit organic growth rate will be lower than the sales organic growth rate, reducing the adjusted operating profit margin. The full-year impact of our revenue investments in 2021, which we estimate would have reduced Watson-Marlow's 2021 adjusted operating profit margin by more than 200 bps, will reduce our adjusted operating profit growth in 2022. While we expect the benefits of operational gearing from increased sales to be partially offset by the full-year impact of the 2021 revenue investments, we currently anticipate the 2022 adjusted operating profit margin will remain above 2020 levels.

Financial Review

The Group reports under International Financial Reporting Standards (IFRS) and references 'adjusted' and 'organic' alternative performance measures where the Board believes that they help to effectively monitor the performance of the Group and support readers of the Financial Statements in drawing comparisons with past performance or our peers. Certain alternative performance measures are also relevant in calculating a meaningful element of Executive Directors' variable remuneration and our debt covenants. Alternative performance measures referenced in the text below are further explained in Note 2 to the Financial Statements, which includes a reconciliation of adjusted operating profit to statutory operating profit.

As a multi-national Group of companies, we trade in a large number of foreign currencies and occasionally acquire or dispose of companies. Therefore, we also refer to 'organic' alternative performance measures, which strip out the effects of the movement of foreign currency exchange rates and of acquisitions and disposals, not included in the prior year. The Board believes that these measures allow readers of the Financial Statements to gain a further understanding of how the Group has performed.

	Adjusted operating profit 2021 £m	Adjusted operating profit margin 2021 %	Adjusted operating profit 2020 £m	Adjusted operating profit margin 2020 %
Steam Specialties	188.7	25.0%	154.3	22.2%
Electric Thermal Solutions	24.0	13.2%	24.6	13.8%
Watson-Marlow	150.0	36.7%	107.3	33.4%
Corporate expenses	(22.4)		(15.8)	
Adjusted operating profit	**340.3**	**25.3%**	**270.4**	**22.7%**
Post-retirement benefit plan in the UK & Canada being closed to future accrual	-		10.5	
Post-retirement benefit plan in Germany being closed to future accrual	2.0		-	
Restructuring costs	-		(4.3)	
Amortisation of acquisition-related intangible assets	(21.4)		(26.6)	
Reversal of acquisition-related fair value adjustments to inventory	-		(1.0)	
Statutory operating profit	**320.9**		**249.0**	

Sales

Group sales were up 13% to £1,344.5 million (2020: £1,193.4 million) and 17% up on an organic basis, the difference being due to a negative foreign exchange impact of over 3%. Organic sales growth more than offset the 3% reduction experienced in 2020, with Group sales well above the pre-pandemic level of £1,242.4 million, demonstrating the resilience of our business model and strategies, as well as the quality of execution by our teams.

The Steam Specialties Business, which accounted for 56% of Group revenue in 2021, experienced strong growth in all regions, supported by a recovery of IP as customers resumed maintenance activity and capital expansion projects that were postponed in 2020. Sales of £754.9 million were up 9% and 12% up on an organic basis, with growth in demand outstripping sales growth and leading to an expansion of the order book carried forward into 2022.

The Electric Thermal Solutions (ETS) Business, which accounted for 14% of Group revenue in 2021, delivered sales of £181.3 million, up 2% or 7% up organically against 2020. Demand growth was ahead of Steam Specialties demand growth, after adjusting for the record US$14 million order from the US Navy in 2020. Demand for Chromalox's decarbonisation-related solutions and from Thermocoax's customers in the Semiconductor sector was particularly strong. As demand growth was significantly ahead of sales growth, the Business ended the year with a record order book carried forward into 2022. Sales were impacted by disruptions in the global supply chain and delays in delivering operational improvements at two of our manufacturing facilities in Chromalox.

Watson-Marlow, which accounted for 30% of Group revenue in 2021, delivered record sales of £408.3 million, 27% above 2020 and 32% up on an organic basis. This growth was supported by exceptional demand from the Pharmaceutical & Biotechnology sector, which accounted for almost 60% of Watson-Marlow's sales in 2021, as well as growth strongly above IP in the Process Industries sector. Manufacturing capacity was ramped-up significantly during the year and would have been higher if not for the impact of global supply chain disruptions. Demand growth exceeded sales growth, leading to the largest expansion in order book of any of our Businesses.

Adjusted operating profit
Group adjusted operating profit was up 26% to £340.3 million and 31% up on an organic basis, the difference being due to a negative foreign exchange impact marginally above 4%.

In Steam Specialties, adjusted operating profit of £188.7 million was up 22% compared with 2020 and 27% up on an organic basis, with the benefits of operational gearing partially offset by a significant increase in revenue investments to support future growth.

ETS delivered an adjusted operating profit of £24.0 million, 3% up organically but 2% down on a reported basis, due to a strong currency headwind.

Watson-Marlow's adjusted operating profit was up 40%, and 46% up organically compared with 2020, notwithstanding continued revenue investments and expansion of manufacturing capacity.

Adjusted operating profit margin
The Group adjusted operating profit margin of 25.3% was up 260 bps, a record level for the Group. On an organic basis, the adjusted operating profit margin improved by 280 bps. Margin expansion was driven by strong growth in sales, with the benefit of operational gearing partially offset by the ramp-up of revenue investments to support growth, which mostly impacted the second half of the year. The adjusted operating profit in 2021 does not reflect a full-year cost of these investments. Had we incurred a full-year of cost, the Group's adjusted operating profit margin would have been lower by less than 200 bps.

Within Steam Specialties, the adjusted operating profit margin grew 280 bps to 25.0%, and 290 bps on an organic basis. For ETS, the adjusted operating profit margin was 13.2%, down 60 bps on both a reported and organic basis. Watson-Marlow's adjusted operating profit margin was up 330 bps to 36.7%, driven by a strong 340 bps organic margin expansion.

ETS adjusted operating profit margin was lower in 2021, due to lower than expected shipments from our manufacturing facility in Ogden (USA) and continued losses in our Soissons (France) manufacturing facility, as well as increased revenue investments and costs to support operational improvements. In the Americas, which represents over 75% of Chromalox sales and experienced the highest demand growth, the adjusted operating profit margin has reached 20%. Thermocoax's adjusted operating profit margin was higher in 2021, mostly as a result of continuing strong demand for semiconductors.

Currency movements
The Group's Income Statement and Statement of Financial Position are exposed to movements in a wide range of different currencies. This stems from our direct sales business model, with a large number of local operating units. These currency exposures and risks are managed through a rigorously applied Treasury Policy, typically using centrally managed and approved simple forward contracts to mitigate exposures to known cash flows and avoiding the use of complex derivative transactions. The largest exposures are to the Euro, US dollar, Chinese Renminbi and Korean Won. While currency effects can be significant, the structure of the Group provides some mitigation through our regional manufacturing presence, diverse spread of geographic locations and through the natural hedge of having a high proportion of our overhead costs in the local currencies of our direct sales operating units.

Currency movements negatively impacted adjusted operating profit by over 4% with translational losses of £10.3 million and an additional transactional loss of £0.8 million. The main transactional exposure flow affecting the Group is the export of products from our factories in the UK, invoiced in sterling, less the import of goods from overseas Group factories and third parties priced predominately in euros and US dollars. The net exposure is approximately £110 million.

Statutory operating profit and margin
Statutory operating profit of £320.9 million was up from £249.0 million in 2020 and the statutory operating profit margin of 23.9% was up 300 bps (2020: 20.9%). The drivers of the increase in statutory operating profit and statutory operating profit margin are as explained in the adjusted operating profit sections above, as well as the reduction in acquired intangible amortisation to £21.4 million (2020: £26.6 million) and the reduction in defined benefit pension credit to £2.0 million (2020: £10.5 million).

Finance costs
Net finance costs decreased to £6.4 million from £8.7 million in 2020. Net bank interest decreased to £4.0 million from £6.0 million in 2020, as a result of lower average net debt.

Net costs under IAS 19 in respect of the Group's defined benefit pension schemes decreased to £1.3 million (2020: £1.5 million). The IFRS 16 interest charge for the year was £1.1 million (2020: £1.2 million).

Profit before tax
Adjusted profit before tax was up 28% to £333.9 million (2020: £261.5 million) and up 33% on an organic basis.

On a statutory basis, profit before tax was £314.5 million (2020: £240.1 million), with the items listed below excluded from adjusted profit before tax:

- a charge of £21.4 million (2020: £26.6 million) for the amortisation of acquisition-related intangible assets; and
- a credit of £2.0 million resulting from the defined benefit retirement plan in Germany being closed to future accrual. In 2020, a credit of £10.5 million related to the UK and Canada defined benefit retirement plans being closed to future accrual.

Taxation
The tax charge on the adjusted profit before tax decreased by 240 bps to 25.1% (2020: 27.5%) which was predominantly driven by the claiming of additional innovation tax reliefs available in a number of countries in which the Group operates. The tax charge in the year benefitted from first-time claims being made on a retrospective basis to also cover previous years.

The Group's overall tax rate reflects the blended average of rates in tax jurisdictions around the world in which the Group trades and generates profit. The Group comprises in the region of 130 operating units, the majority of which are small, reflecting our local direct sales business model. On a statutory basis the Group's effective tax rate was 25.3% (2020: 27.5%).

For 2022, we currently anticipate that based on a forecast mix of profits, the Group effective tax rate will be approximately 26%.

In April 2019, the European Commission's investigation into the UK's Controlled Foreign Company regime concluded that certain aspects constituted State Aid, requiring the UK tax authority to recover the benefit from affected taxpayers. During 2021, the Group received and settled Charging Notices totalling £4.9 million for the benefit received in 2017 and 2018 and has recognised a receivable for this amount at the year end balance sheet date. The Group has not received a Charging Notice for the benefit received prior to 2017, which it estimates to be £2.8 million. Her Majesty's Customs & Excise has enquired into the benefit received during 2019, which the Group estimates to be £1.0 million. No provisions have been recognised at the yearend balance sheet date for these liabilities. Further details are included in Note 5 to the Financial Statements.

Earnings per share
Adjusted earnings per share increased by 32% to 338.9 pence (2020: 256.6 pence), ahead of the increase in adjusted operating profit due to a reduction in the effective tax rate. Statutory earnings per share were 318.3 pence (2020: 235.5 pence). The statutory fully diluted earnings per share were not materially different to the statutory earnings per share in either year.

Dividends
The Group has a progressive dividend policy where dividend payments follow underlying earnings per share growth while maintaining prudent levels of dividend cover. The aim is to provide sustainable, affordable dividend growth, building on our 54-year record of dividend progress, with a compound annual increase of 11% over that period and an 11% per annum increase over the last 10 years. The Board is proposing a final dividend of 97.5. pence per share for 2021 (2020: 84.5 pence) payable on 20th May 2022 to shareholders on the register at 22nd April 2022. Together with the interim dividend of 38.5 pence per share (2020: 33.5 pence), the total Ordinary dividend for the year is 136.0 pence per share, an increase of 15% on the Ordinary dividend of 118.0 pence per share in 2020.

The total amount paid in dividends during the year was £91.0 million, 10% above the £82.5 million paid in 2020.

Capital employed

Capital employed	**2021 £m**	2020* £m
Property, plant and equipment	277.4	261.3
Right-of-use assets (IFRS 16)	62.9	36.3
Software & Development costs*	38.9	33.4
Inventories	201.3	180.1
Trade receivables	272.3	226.3
Prepayments and other current assets	61.7	41.3
Trade, other payables, current provisions and current tax	(255.3)	(194.9)
Capital employed	**659.2**	**583.8**
Acquired intangibles including goodwill	628.0	665.6
Investment in Associate	-	-
Post-retirement benefits	(44.7)	(98.6)
Net deferred tax	(35.7)	(28.5)
Non-current provisions and long-term payables	(6.2)	(7.1)
Lease liabilities	(60.1)	(34.1)
Net debt	(130.5)	(228.8)
Net assets	**1,010.0**	**852.3**
Adjusted operating profit	340.3	270.4
Adjusted operating profit (excluding IFRS 16)	339.2	269.3
Average capital employed	621.5	589.2
Average capital employed (excluding IFRS 16)	571.9	550.6
Return on capital employed	**54.7%**	**45.9%**
Return on capital employed (excluding IFRS 16)	**59.3%**	**48.9%**

*Restated following IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements (Software as a Service (SaaS)) - see Note 1 to the Financial Statements for further details

Total capital employed increased by 13% at reported exchange rates and 16% on a constant currency basis. This compares with organic sales growth of 17%.

Tangible fixed assets (PPE and IFRS 16 right-of-use-assets) increased by £42.7 million to £340.3 million, primarily as a result of an increase in right-of-use assets from the addition of new manufacturing facilities at Watson-Marlow BioPure in Portsmouth (UK) and Thermocoax in Normandy (France).

Total working capital increased by £39.5 million. The ratio of working capital to sales (on a constant currency basis) reduced by 40 bps to 20.8% (2020: 21.2%). Going forward, we anticipate maintaining a similar percentage of working capital to sales.

Return on capital employed (ROCE)
ROCE measures effective management of fixed assets and working capital relative to the profitability of the business. ROCE increased by 880 bps to 54.7% (2020: 45.9%), primarily due to the 31% organic growth in adjusted operating profit, outpacing the growth in the Group's capital investment. Excluding the effect of IFRS 16, ROCE increased by 1,040 bps. On a constant currency basis and excluding the impacts of acquisitions, disposals and IFRS 16, ROCE increased by 1,170 bps. ROCE is defined in Note 2 to the Financial Statements.

Return on invested capital (ROIC)
ROIC measures the return on invested capital, both equity and debt, relative to the adjusted operating profit after tax. ROIC increased by 480 bps to 22.0% (2020: 17.2%). Excluding the effect of IFRS 16, ROIC grew by 510 bps. On a constant currency basis and excluding acquisitions, disposals and IFRS 16, ROIC grew by 570 bps. ROIC is defined in Note 2 to the Financial Statements.

Post-retirement benefits
The net post-retirement benefit liability under IAS 19 decreased to £44.7 million (2020: £98.6 million). Assets rose by £29.0 million (5%), reflecting greater than expected returns. Liabilities decreased by £24.9 million (4%), largely due to an increase in the AA corporate bond rates used to discount future cash flows.

The main UK schemes, which constitute 89% of assets, were closed to new members in 2001 and closed to future accrual with effect from 30th June 2020. These schemes continue to be managed under a dynamic de-risking strategy whereby asset and liability values are monitored on a daily basis by the asset manager and appropriate asset allocation decisions taken as the funding level improves against pre-agreed trigger points. During 2021 the defined benefit scheme in Germany was closed to future accrual, effective from 1st January 2021, resulting in a £2.0 million credit to the Income Statement (See Note 2 to the Financial Statements).

Cash flow and treasury

Cash flow	2021 £m	2020 £m
Adjusted operating profit	340.3	270.4
Depreciation and amortisation (excluding IFRS 16)	35.7	36.7
Depreciation of leased assets	11.4	12.1
Cash payments to pension schemes more than the charge to adjusted operating profit	(5.6)	(3.9)
Equity settled share plans	9.2	7.0
Working capital changes	(39.5)	13.4
Repayments of principal under lease liabilities	(11.7)	(12.2)
Capital expenditure (including software and development)	(64.1)	(49.6)
Capital disposals	2.0	1.9
Adjusted cash from operations	**277.7**	**275.8**
Net interest	(5.1)	(7.2)
Income taxes paid	(78.1)	(71.9)
Free cash flow	**194.5**	**196.7**
Net dividends paid	(91.0)	(82.5)
Purchase of employee benefit trust shares/Proceeds from issue of shares	(24.6)	(12.5)
(Acquisitions)/Disposals of subsidiaries & restructuring costs	-	(9.4)
Cash flow for the year	**78.9**	**92.3**
Exchange movements	19.4	(25.9)
Opening net debt	(228.8)	(295.2)
Net debt at 31st December (excluding IFRS 16)	**(130.5)**	**(228.8)**
IFRS 16 lease liability	(60.1)	(34.1)
Net debt and lease liability at 31st December	(190.6)	(262.9)

Adjusted cash from operations is a measure of the cash flow generated from our companies which reflects the components within the control of local management. A reconciliation between this and statutory operating cash flow can be found in Note 2 to the Financial Statements.

Adjusted cash from operations improved by £1.9 million to £277.7 million (2020: £275.8 million) representing 82% cash conversion.

Movements in working capital are discussed in the Capital Employed section.

The capital intensity of our business is low, with capital expenditure typically between 4% and 6% of sales. During the year, our capital expenditure was a record £64.1 million, equivalent to 5% of sales. Capital expenditure increased by £14.5 million, principally as a result of expenditure on new manufacturing capacity for Watson-Marlow, including BioPure in Portsmouth (UK). The Group also continued to invest in other significant projects, including development of our digital capabilities.

We are targeting capital expenditure in 2022 to be between 6% and 7% of sales, above our typical range as we invest in new production facilities for Watson-Marlow.

Tax paid in the year increased by £6.2 million to £78.1 million as a result of the increase in profitability during 2021. Free cash flow for the year was £194.5 million (2020: £196.7 million).

Dividend payments were £91.0 million, including payments to minorities (2020: £82.5 million) and represent the final dividend for 2020 and the interim dividend for 2021.

The net of share purchases and new shares issued for the Group's various employee share schemes resulted in a cash outflow of £24.6 million (2020: £12.5 million) reflecting the move to acquire shares on the open market rather than issue new equity.

The fundamentals of our financial resilience

The strong operational and financial performance of the Group during 2021 continues to reflect the resilience of our business model. As the world continues to operate against the backdrop of the COVID-19 pandemic we have achieved a record year of financial performance. We have also continued to focus on investment to support our future growth, including in new manufacturing capacity, delivering on our sustainability goals and enhancing our digital capability. The Group's longstanding track record of increasing returns to shareholders has continued with a 15% year-on-year increase in ordinary dividends.

Our products and solutions are used across a broad range of industries and geographical markets, which links our business performance to movements in global industrial production (IP). In 2021, global IP rebounded following the decline in 2020 due to the effects of COVID-19. As in previous years, our business model supported our outperformance against global IP due to our ability to self-generate sales (accounting for 35% of sales) and a significant base business in maintenance and repair sales (accounting for 50% of sales). These sales are funded from our customers' operating budgets. The remaining 15% of sales are related to large projects, funded from customers' capital expenditure budgets, which are more heavily influenced by economic cycles. Over 60% of our sales are to defensive, less cyclical sectors and no single customer accounts for more than 1.5% of Group sales.

Strong focus on cash generation and liquidity

A key strength of the business is our ability to generate cash. Following the exceptional performance during 2020 of 102% cash conversion, we have delivered a more normalised 82% cash conversion in 2021 as a result of (i) a step up in capital expenditure as we have increased investment in expanding production capacity and (ii) working capital investment to support underlying business growth.

This performance allowed us to continue to strengthen our balance sheet, resulting in a year end net debt position, excluding leases, of £130.5 million (2020: £228.8 million) and a net debt to EBITDA ratio of 0.35 times (2020: 0.7 times). At the end of the year total committed and undrawn debt facilities amounted to £346 million alongside a net cash balance of £219 million. The average tenor of our debt is 26 months with the earliest contractual repayment in March 2022.

Resilience over the short, medium and long term

Our business model and the investments we have continued to make in our Group, combined with our high cash generation, position us well to adapt to economic cycles. Our Going Concern and Viability analysis gives us confidence in the robustness of our business and our capital structure, even under downside scenarios. We are monitoring developments in both Russia and Ukraine, which collectively account for just over 1% of Group sales.

We have undertaken scenario-based modelling of our key risks, which underpins our confidence in our short and medium-term resilience. The continued implementation of our strategy supports our longer-term resilience and we have continued to refresh this strategy, with a focus on the changing economic, environmental and social factors and their ability to impact our businesses in the future.

Going Concern statement

The Group's principal objective when managing liquidity is to safeguard the Group's ability to continue as a going concern for at least 12 months from the date of signing the 2021 Annual Report. The Group retains sufficient resources to remain in compliance with all the required terms and conditions within its borrowing facilities with material headroom and no material uncertainties have been identified.

The Group continues to conduct ongoing risk assessments, which include the potential impact of the ongoing COVID-19 pandemic on its business operations and liquidity. Consideration has also been given to reverse stress tests, which seek to identify factors that might cause the Group to require further liquidity, and a view can be formed of the probability of those occurring.

Our financial position remains robust, with the earliest maturity of any facility due in March 2022 being €70 million due on the €160 million Term Loan, which is accounted for within the cash flow forecast. The debt facilities contain a leverage (net debt/EBITDA) covenant of up to 3.5x. Certain debt facilities also contain an interest cover (EBITDA/Net Finance Expense) covenant of a minimum of 3.0x. The Group regularly monitors its financial position to ensure that it remains within the terms of its banking covenants. At 31st December 2021 leverage (defined as net debt divided by adjusted earnings before interest, tax, depreciation and amortisation) was 0.35x (31st December 2020: 0.7x), showing a continued reduction since the prior period. Interest cover (defined as adjusted earnings before interest, tax, depreciation and amortisation divided by net bank interest) was 93x at 31st December 2021 (31st December 2020: 51x).

Reverse ‘stress testing’ was also performed to assess what level of business under-performance would be required for a breach of the financial covenants to occur, the results of which evidenced that no reasonably possible change in future forecast cash flows would cause a breach of these covenants. In addition, the reverse stress test does not take into account any mitigating actions which the Group would implement in the event of a severe and extended revenue and profitability decline, which would increase the headroom further.

Having assessed the relevant business risks, including the impact of COVID-19 as discussed in our principal risks on pages 41 and 42, and considered the headroom available under several alternative scenarios as set out in the viability assessment below, the Directors consider it appropriate to continue to adopt the going concern basis in preparing the financial statements.

Assessment of Viability
In accordance with provision 31 of the UK Corporate Governance Code 2018, the Board has assessed the viability of the Group, taking into account the Group’s current financial position, business strategy, the Board’s risk appetite and the potential impacts of the Group’s principal risks. We set out the eight principal risks we have identified in Note 1 to the Financial Statements.

The Board has adopted a five-year viability assessment, which it believes to be appropriate as the timeframe is covered by the Group’s forecasts; takes into account the nature of the Group’s principal risks, a number of which are external and have the potential to impact over short time periods; and is in alignment with the Group’s proposed new principal financing facility duration. While the Board has no reason to believe that the Group will not be viable over a longer period, given the inherent uncertainty involved, the Board believes that a five-year period provides a reasonable degree of confidence while still providing a longer-term perspective.

In making their assessment, the Board completed a robust assessment, supported by detailed modelling, of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency, or liquidity. In addition to completing an impact assessment of the principal risks, the Board considered the probability of the occurrence of the principal risks, the Company’s ability to control them and the effectiveness of mitigating actions. In every modelled scenario the Group is able to demonstrate that it continues to remain viable. The scenarios modelled to support this process were as follows.

Scenarios Modelled	***Links to principal risks***
Scenario 1: Revenue Fall We considered a combination of forward-looking scenarios in which sales were adversely impacted in all years of the assessment period. The reductions reflected the combined impact on the Group of economic political instability on global Industrial Production output, material foreign exchange rate fluctuations and a loss of manufacturing output at a significant Group manufacturing site. We assumed a reduction of 17% in sales and no mitigating actions were assumed to have been taken by the Group. Despite these impacts the Group continued to trade profitably and remained comfortably within the financial covenants contained within our external financing facilities at all times.	**Risk 1:** Economic and political instability **Risk 2:** Significant exchange rate movement **Risk 4:** Loss of manufacturing output at any Group factory **Risk 7:** Inability to identify or respond to changes in customer needs **Risk 8:** Loss of critical supplier
Scenario 2: Exceptional Charge We considered the impact of a potential large, one-off expense as could be required in the case of a legal or regulatory fine or a compensation payment. An expense equivalent to 10% of the 2021 adjusted Group operating profit was assumed alongside a negative impact of 10% on sales resulting from the associated reputational damage. Despite these impacts the Group continued to trade profitably and remained comfortably within the financial covenants contained within our external financing facilities at all times.	**Risk 6:** Breach of legal and regulatory requirements (including ABC laws)
Scenario 3: Cyber Attack We considered the occurrence of a cyber attack that succeeds in severely impacting Group systems. We assumed an immediate disruption to trading, followed by a fall in sales in subsequent years resulting from the associated negative reputational impact; the combined effect being a loss of 5% of sales in each year over the period. A significant initial cost was also included to rectify the immediate impact of the attack followed by increased investment in all subsequent years to strengthen our cybersecurity. Despite these impacts the Group continued to trade profitably and remained comfortably within the financial covenants contained within our external financing facilities at all times.	**Risk 3:** Cybersecurity
Scenario 4: Acquisition Failure We considered a scenario whereby a large acquisition has failed to achieve the acquisition business case. We assumed a 20% shortfall in sales in the acquired business	**Risk 5:** Failure to realise acquisition objectives

and disposal for a lower cash consideration than the original consideration. Despite these impacts the Group continued to trade profitably and remained comfortably within the financial covenants contained within our external financing facilities at all times.	

An additional scenario was modelled to ascertain what level of revenue or adjusted operating profit margin reduction would be required to cause a breach of the Group's banking covenants. The reductions in revenue and adjusted operating profit margin were significantly higher than those shown in the above scenarios.

While linked to the Group's principal risks, the scenarios detailed above are hypothetical and designed to test the ability of the Group to withstand such severe outcomes. In practice, the Group has an established series of risk control measures in place that are designed to both prevent and mitigate the impact of any such occurrences from taking place. The results of the stress testing undertaken showed that the Group would be able to absorb the impact of the scenarios considered should they occur within the assessment time period. In all of the scenarios considered the Group was not required to implement any mitigating actions in relation to reductions in forecast expenditure in order to remain within its banking covenants.

Viability statement
Based on the outcomes of the scenarios and considering the Group's financial position, strategic plans and principal risks, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment. The Directors' statement regarding the adoption of the going concern basis for the preparation of the financial statements can be found on page 28 and 29.

Long-term resilience
The Group has a long track record, over 130 years, of consistently adapting to changing macro-economic, environmental and social factors supported by our business model. While our strategy and business model lessen any material impact from our principal risk factors, we nevertheless continuously review our markets, listen to our customers and adapt our solutions, while working responsibly and in line with our Values to build long-term sustainability.

We recognise the need to anticipate and mitigate the impact of climate-related change, although it is not classed as a principal risk for our Group. In 2021 we launched our One Planet strategy covered in more detail on page 7. We believe that the focus on climate change will drive a positive impact for the business and our customers.

Steam remains the world's most efficient heat transfer medium with multiple on-site applications. We have a highly resilient business and strategy that will remain relevant across different climate-related scenarios, but we are not complacent and plan to conduct further scenario and risk analysis at a business level going forward. We continue to invest in research and development into solutions which will reduce our environmental impact and support our customers to reduce their energy use and carbon emissions. We are exploring synergies within our thermal energy management portfolio, which will enable us to combine core capabilities from our Steam Specialties and Electric Thermal Solutions businesses to develop our products and service capabilities for quantifiable sustainability benefits. This will enable us to support the evolving needs of our customers as they seek to mitigate the impact of their operations on the environment.

Capital structure

The Board keeps the capital requirements of the Group under regular review, maintaining a strong financial position to protect the business and provide flexibility of funding for growth. The Group earns a high return on capital, which is reflected in strong cash generation over time. Our capital allocation policy remains unchanged. Our first priority is to maximise investment in the business to generate further good returns in the future, aligned with our strategy for growth and targeting improvement in our key performance indicators. Next, we prioritise finding suitable acquisitions that can expand our addressable market through increasing our geographic reach, deepening our market penetration, or broadening our product range. Acquisition targets need to exhibit a good strategic fit and meet strict commercial, economic and return on investment criteria. When cash resources significantly exceed expected future requirements, we would look to return capital to shareholders, as evidenced by special dividends declared in respect of 2010, 2012 and 2014. However, in the near term, we will look to reduce our financial leverage prior to considering new returns of capital to shareholders.

Audit Tender

Deloitte was appointed as the Group's external auditor in 2014, with the year ended 31st December 2014 being the first year Deloitte provided an audit opinion on the Group's Financial Statements.
In line with the Statutory Auditors and Third Country Auditors Regulations 2016, the Group is required to conduct a tender process for the external audit at least every 10 years. A tender process is therefore required to take place by 2023.

Due to a number of potential regulatory changes, primarily resulting from the proposals contained within the Department for Business, Energy and Industrial Strategy (BEIS) 'White Paper': Restoring trust in audit and corporate governance, issued during 2021, the Group will be conducting an external audit tender process one year early during 2022 in order to ensure continuity of external auditor during the likely multi-year period of implementation. It is currently expected that the tender process will take place in the first half of 2022 with the expectation that the selected auditor will be in place to review the Half Year results for the period ending 30th June 2023. Resolutions will be proposed at the 2023 AGM to appoint the proposed auditor.

Spirax-Sarco Engineering plc

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31ST DECEMBER 2021

	Note	2021 £m	2020* £m
ASSETS			
Non-current assets			
Property, plant and equipment		277.4	261.3
Right-of-use assets		62.9	36.3
Goodwill		411.2	422.4
Other intangible assets*		255.7	276.6
Prepayments		1.3	1.4
Investment in Associate		-	-
Taxation recoverable		4.9	-
Deferred tax assets		46.1	50.9
		1,059.5	1,048.9
Current assets			
Inventories		201.3	180.1
Trade receivables		272.3	226.3
Other current assets		44.7	31.8
Taxation recoverable		10.8	8.1
Cash and cash equivalents	8	274.6	246.2
		803.7	692.5
Total assets		**1,863.2**	**1,741.4**
EQUITY AND LIABILITIES			
Current liabilities			
Trade and other payables		217.0	160.2
Provisions		5.2	6.1
Bank overdrafts	8	55.6	22.2
Current portion of long-term borrowings	8	59.6	0.6
Short-term lease liabilities	8	11.2	10.3
Current tax payable		33.1	28.6
		381.7	228.0
Net current assets		**422.0**	**464.5**
Non-current liabilities			
Long-term borrowings	8	289.9	452.2
Long-term lease liabilities	8	48.9	23.8
Deferred tax liabilities		81.8	79.4
Post-retirement benefits		44.7	98.6
Provisions		1.5	2.0
Long-term payables		4.7	5.1
		471.5	661.1
Total liabilities		**853.2**	**889.1**
Net assets	3	**1,010.0**	**852.3**
Equity			
Share capital		19.8	19.8
Share premium account		86.3	84.8
Other reserves		(58.2)	(36.1)
Retained earnings*		961.1	782.8
Equity shareholders' funds		1,009.0	851.3
Non-controlling interest		1.0	1.0
Total equity		**1,010.0**	**852.3**
Total equity and liabilities		**1,863.2**	**1,741.4**

*The prior period comparatives for Other intangible assets and Retained earnings have been restated following the IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements. See note 1 for further details. Due to the immaterial nature of the adjustment, no additional Statement of Financial Position as at the beginning of the prior year has been presented.

Spirax-Sarco Engineering plc

CONSOLIDATED INCOME STATEMENT FOR THE YEAR ENDED 31ST DECEMBER 2021

	Note	Adjusted 2021 £m	Adj't* 2021 £m	Total 2021 £m	Adjusted 2020 £m	Adj't* 2020 £m	Total 2020 £m
Revenue	2, 3	**1,344.5**	**-**	**1,344.5**	**1,193.4**	**-**	**1,193.4**
Operating costs		(1,004.2)	(19.4)	(1,023.6)	(923.0)	(21.4)	(944.4)
Operating profit	2, 3	**340.3**	**(19.4)**	**320.9**	**270.4**	**(21.4)**	**249.0**
Financial expenses		(9.8)	-	(9.8)	(10.1)	-	(10.1)
Financial income		3.4	-	3.4	1.4	-	1.4
Net financing expense	3, 4	(6.4)	-	(6.4)	(8.7)	-	(8.7)
Share of profit of Associate		-	-	-	(0.2)	-	(0.2)
Profit before taxation		**333.9**	**(19.4)**	**314.5**	**261.5**	**(21.4)**	**240.1**
Taxation	5	(83.9)	4.3	(79.6)	(72.0)	5.8	(66.2)
Profit for the period		**250.0**	**(15.1)**	**234.9**	**189.5**	**(15.6)**	**173.9**
Attributable to:							
Equity shareholders		249.7	(15.1)	234.6	189.2	(15.6)	173.6
Non-controlling interest		0.3	-	0.3	0.3	-	0.3
Profit for the period		**250.0**	**(15.1)**	**234.9**	**189.5**	**(15.6)**	**173.9**
Earnings per share	2, 6						
Basic earnings per share		338.9p		318.3p	256.6p		235.5p
Diluted earnings per share		338.0p		317.5p	255.8p		234.8p
Dividends	7						
Dividends per share				136.0p			118.0p
Dividends paid during the year (per share)				123.0p			111.5p

*Adjusted figures exclude certain items, as set out and explained in the Financial Review and as detailed in Note 2. All amounts relate to continuing operations.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31ST DECEMBER 2021

	2021 £m	2020 £m
Profit for the year	**234.9**	**173.9**
Items that will not be reclassified to profit or loss:		
Remeasurement gain/(loss) on post-retirement benefits	46.3	(40.2)
Deferred tax on remeasurement (gain)/loss on post-retirement benefits	(8.9)	8.2
	37.4	(32.0)
Items that may be reclassified subsequently to profit or loss:		
Foreign exchange translation differences and net investment hedges	(6.8)	(24.5)
Loss on cash flow hedges net of tax	(2.8)	(0.7)
	(9.6)	(25.2)
Total comprehensive income for the year	**262.7**	**116.7**
Attributable to:		
Equity shareholders	262.4	116.4
Non-controlling interest	0.3	0.3
Total comprehensive income for the year	**262.7**	**116.7**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31ST DECEMBER 2021

	Share Capital	Share Premium account	Other reserves	Retained Earnings	Equity shareholders' funds	Non-controlling interest	Total Equity
	£m	£m	£m	£m	£m	£m	£m
Balance at 1st January 2021 (restated)*	**19.8**	**84.8**	**(36.1)**	**782.8**	**851.3**	**1.0**	**852.3**
Profit for the year				**234.6**	**234.6**	**0.3**	**234.9**
Other comprehensive (expense)/income:							
Foreign exchange translation differences and net investment hedges	-	-	(6.8)	-	(6.8)	-	(6.8)
Remeasurement gain on post-retirement benefits	-	-	-	46.3	46.3	-	46.3
Deferred tax on remeasurement gain on post-retirement benefits	-	-	-	(8.9)	(8.9)	-	(8.9)
Cash flow hedges	-	-	(2.8)	-	(2.8)	-	(2.8)
Total other comprehensive (expense)/income for the year	-	-	(9.6)	37.4	27.8	-	27.8
Total comprehensive (expense)/income for the year	-	-	(9.6)	272.0	262.4	0.3	262.7
Contributions by and distributions to owners of the Company:							
Dividends paid	-	-	-	(90.7)	(90.7)	(0.3)	(91.0)
Equity settled share plans net of tax	-	-	-	(3.0)	(3.0)	-	(3.0)
Issue of share capital	-	1.5	-	-	1.5	-	1.5
Employee Benefit Trust shares	-	-	(12.5)	-	(12.5)	-	(12.5)
Transfer between reserves	-	-	-	-	-	-	-
Balance at 31st December 2021	**19.8**	**86.3**	**(58.2)**	**961.1**	**1,009.0**	**1.0**	**1,010.0**

* As a result of the IFRS Interpretations Committee agenda decision released during 2021, the Group has reassessed the accounting treatment in relation to customisation and configuration costs for cloud-based software (Software as a Service (SaaS)). This has resulted in an adjustment to opening reserves of £3.7 million. See note 1 for further details.

Other reserves represent the Group's translation, net investment hedge, cash flow hedge, capital redemption and Employee Benefit Trust reserves.

The non-controlling interest is a 2.5% share of Spirax-Sarco (Korea) Ltd held by employee shareholders.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31ST DECEMBER 2020

	Share Capital £m	Share Premium account £m	Other reserves £m	Retained Earnings £m	Equity shareholders' funds £m	Non-controlling interest £m	Total Equity £m
Balance at 1st January 2020	**19.8**	**81.0**	**(10.6)**	**735.1**	**825.3**	**1.0**	**826.3**
Restatement for SaaS arrangements*	-	-	-	**(3.7)**	**(3.7)**	-	**(3.7)**
Balance at 1st January 2020	**19.8**	**81.0**	**(10.6)**	**731.4**	**821.6**	**1.0**	**822.6**
Profit for the year				**173.6**	**173.6**	**0.3**	**173.9**
Other comprehensive (expense)/income:							
Foreign exchange translation differences and net investment hedges	-	-	(24.5)	-	(24.5)	-	(24.5)
Remeasurement loss on post-retirement benefits	-	-	-	(40.2)	(40.2)	-	(40.2)
Deferred tax on remeasurement loss on post-retirement benefits	-	-	-	8.2	8.2	-	8.2
Cash flow hedges	-	-	(0.7)	-	(0.7)	-	(0.7)
Total other comprehensive expense for the year	-	-	(25.2)	(32.0)	(57.2)	-	(57.2)
Total comprehensive (expense)/income for the year	-	-	(25.2)	141.6	116.4	0.3	116.7
Contributions by and distributions to owners of the Company:							
Dividends paid	-	-	-	(82.2)	(82.2)	(0.3)	(82.5)
Equity settled share plans net of tax	-	-	-	(8.0)	(8.0)	-	(8.0)
Issue of share capital	-	3.8	-	-	3.8	-	3.8
Employee Benefit Trust shares	-	-	(0.3)	-	(0.3)	-	(0.3)
Transfer between reserves	-	-	-	-	-	-	-
Balance at 31st December 2020	**19.8**	**84.8**	**(36.1)**	**782.8**	**851.3**	**1.0**	**852.3**

* As a result of the IFRS Interpretations Committee agenda decision released during 2021, the Group has reassessed the accounting treatment in relation to customisation and configuration costs for cloud-based software (Software as a Service (SaaS)). This has resulted in an adjustment to opening reserves of £3.7 million. See note 1 for further details.

Spirax-Sarco Engineering plc

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31ST DECEMBER 2021

	Note	2021 £m	2020 £m
Cash flows from operating activities			
Profit before taxation		314.5	240.1
Depreciation, amortisation and impairment		69.0	75.4
Profit on disposal of fixed assets		(0.5)	(0.3)
Loss on disposal of subsidiary		-	0.4
Reversal of acquisition-related fair value adjustments to inventory		-	1.0
Cash payments to the pension schemes greater than the charge to operating profit		(7.6)	(14.7)
Equity settled share plans		9.2	7.0
Net financing expense		6.4	8.7
Operating cash flow before changes in working capital and provisions		**391.0**	**317.6**
(Increase)/decrease in trade and other receivables		(71.3)	15.1
(Increase)/decrease in inventories		(26.7)	3.8
(Decrease)/increase in provisions		(1.0)	3.3
(Decrease)/increase in trade and other payables		59.5	(8.7)
Cash generated from operations		351.5	331.1
Income taxes paid		(78.1)	(71.9)
Net cash from operating activities	2	**273.4**	**259.2**
Cash flows from investing activities			
Purchase of property, plant and equipment		(52.8)	(42.0)
Proceeds from sale of property, plant and equipment		2.0	2.2
Purchase of software and other intangibles		(8.1)	(4.9)
Development expenditure capitalised		(3.2)	(2.7)
Disposal of subsidiary		-	(0.3)
Acquisition of businesses net of cash acquired	9	-	(4.8)
Interest received		3.4	1.4
Net cash used in investing activities		**(58.7)**	**(51.1)**
Cash flows from financing activities			
Proceeds from issue of share capital		1.5	2.0
Employee Benefit Trust share purchase		(26.1)	(14.5)
Repaid borrowings	8	(77.5)	(175.0)
New borrowings	8	-	138.3
Interest paid		(8.5)	(8.6)
Repayment of lease liabilities	8	(11.7)	(12.2)
Dividends paid (including minorities)	7	(91.0)	(82.5)
Net cash used in financing activities		**(213.3)**	**(152.5)**
Net change in cash and cash equivalents	8	**1.4**	**55.6**
Net cash and cash equivalents at beginning of period		**224.0**	**168.3**
Exchange movement	8	(6.4)	0.1
Net cash and cash equivalents at end of period	8	**219.0**	**224.0**
Borrowings	8	(349.5)	(452.8)
Net debt at end of period	8	**(130.5)**	**(228.8)**
Lease liabilities	8	(60.1)	(34.1)
Net debt and lease liabilities at end of period	8	(190.6)	(262.9)

NOTES TO THE FINANCIAL STATEMENTS

1. BASIS OF PREPARATION

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) adopted for use in the United Kingdom (UK) and therefore comply with those parts of the Companies Act 2006 that are applicable to companies reporting under IFRS. IFRS includes the standards and interpretations approved by the International Accounting Standards Board (IASB) including International Accounting Standards (IAS) and interpretations issued by the IFRS Interpretations Committee (IFRIC).

The financial information included in this News Release does not constitute statutory accounts of the Group for the years ended 31st December 2021 and 2020, although it is derived from those accounts. Statutory accounts for the year ended 31st December 2020 have been reported on by the Group's auditor and delivered to the Registrar of Companies. Statutory accounts for the year ended 31st December 2021 have been audited and will be delivered to the Registrar of Companies following the Company's Annual General Meeting. The report of the auditors for both years was (i) unqualified, (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under Section 498 (2) or (3) of the Companies Act 2006.

If approved at the Annual General Meeting on 11th May 2022, the final dividend will be paid on 20th May 2022 to shareholders on the register at 22nd April 2022. No scrip alternative to the cash dividends is being offered.

Copies of the Annual Report will be sent on 4th April 2022 to shareholders who have requested a hard copy and can be obtained from our office at The Grange, Bishops Cleeve, Cheltenham, GL52 8YQ. The Report will also be available on our website at www.spiraxsarcoengineering.com.

As outlined below, there have been no significant changes in accounting policies from those set out in the Spirax-Sarco Engineering plc 2020 Annual Report. The accounting policies have been applied consistently throughout the years ended 31st December 2020 and 31st December 2021.

NEW STANDARDS AND INTERPRETATIONS ADOPTED IN THE CURRENT YEAR

During the current year, the Group has applied an amendment to IFRS Standards and Interpretations issued by the International Accounting Standards Board (IASB) effective for annual periods that begin on or after 1st January 2021. Adoption has not had a material impact on the disclosures or on the amounts reported in these Financial Statements:

- Interest Rate Benchmark Reform - Phase 2 (Amendments to IFRS 9, IAS 39 and IFRS 7, IFRS 4 and IFRS 16);

In April 2021 the IFRS Interpretations Committee published its agenda decision regarding configuration and customisation costs in Cloud Computing Arrangements (Software as a Service, (SaaS)) under IAS 38. The primary theme from this agenda decision was that unless the underlying software meets the criteria for recognising a separate asset (ie) the Group obtains control of the software) then it is expected that the costs associated with the configuration and customisation of this software will be recognised as an expense rather than capitalised as an intangible asset.

During the year the Group performed a review of previously capitalised configuration and customisation costs as a result of this accounting policy change, resulting in a £3.7 million adjustment to opening reserves and intangible assets in the prior year. As a result, the comparator period in the Statement of Financial Position and Statement of Changes in Equity have been restated. Due to the immaterial nature of the adjustment, no additional Statement of Financial Position as at the beginning of the prior year has been presented.

The Economy in Argentina remains subject to high inflation. At 31st December 2021 we have concluded that applying IAS 29 (Financial Reporting in Hyperinflationary Economies) is not required as the impact of adopting it is not material. We will continue to assess the position going forward.

NEW STANDARDS AND INTERPRETATIONS NOT YET ADOPTED

At the date of authorisation of these Financial Statements, the Group has not applied the following new and revised IFRS Standards that have been issued but are not yet effective:

- Amendments to IFRS 3: Reference to the Conceptual Framework;
- IFRS 17 (Insurance Contracts);
- IFRS 10 and IAS 28 (amendments): Sale or Contribution of Assets between an Investor and its Associate or Joint Venture;
- Amendments to IAS 1: Classification of liabilities as current or non-current;
- Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting Policies;
- Amendments to IAS 8: Definition of Accounting Estimates;
- Amendments to IAS 12: Deferred Tax related to Assets and Liabilities arising from a Single Transaction;
- Amendments to IAS 16: Proceeds before intended use;
- Amendments to IAS 37: Cost of fulfilling a contract; and
- Annual Improvements to IFRS Standards 2018-2020 cycle.

The Directors do not expect that the adoption of the Standards listed above will have a material impact on the Financial Statements of the Group in future periods.

GOING CONCERN

In determining the basis of preparation for the Consolidated Financial Statements, the Directors have considered the Group’s available resources, current business activities and factors likely to impact on its future development and performance, including the impact of COVID-19 on the Group, which are described in the Chair’s Statement, Operating Review and Financial Review.

Following this assessment, the Board of Directors are satisfied that the Group has sufficient resources to continue in operation for the foreseeable future, a period of not less than 12 months from the date of this report. Accordingly, they continue to adopt the going concern basis in relation to this conclusion and preparing the Consolidated Financial Statements.

PRINCIPAL RISKS

The Group has processes in place to identify, evaluate and mitigate the principal risks that could have an impact on the Group's performance. The principal risks, as agreed at the most recent meeting of the Risk Management Committee, together with a description of why they are relevant and if the significance of the risk has changed during 2021 are set out below. Details of how they link with the Group's strategy, an explanation of the change in risk and how mitigation is managed will be disclosed in the 2021 Annual Report.

- ***Economic and political instability – Consistent compared to 2020***

The Group operates worldwide and maintains operations in territories that have historically experienced economic or political instability. This type of instability, which includes the uncertainties of regime change, creates risks for our locally based direct operations and broader risks to credit, liquidity and currency.

- ***Significant exchange rate movements – Consistent compared to 2020***

The Group reports its results and pays dividends in sterling. Operating and manufacturing companies trade in local currency. With sales companies and manufacturing spread across the globe, the nature of the Group's business necessarily results in exposure to exchange rate volatility.

- ***Cybersecurity – Consistent compared to 2020***

Cybersecurity risks include risks from malware, accident, statutory and legislative requirements, malicious actions and other unauthorised access by third parties, including through our supply chain.

- ***Loss of manufacturing output at any Group factory – Increased compared to 2020***

The risk includes loss of output as a result of natural disasters, industrial action, accidents or any other cause. Loss of manufacturing output at any important plant risks serious disruption to sales operations.

- ***Failure to realise acquisition objectives – Consistent compared to 2020***

Whilst the Group mitigates this risk in various ways, including through comprehensive due diligence, professional advisers and contractual protections, there are some variables that are uncontrollable or difficult to control, such as economic conditions, culture clashes and employee movement, which could impact acquisition objectives.

- ***Breach of legal and regulatory requirements (including ABC laws) – Consistent compared to 2020***

We operate globally and must ensure compliance with laws and regulations wherever we do business. As we grow into new markets and territories, we must continually review and update our operations and procedures, and ensure our colleagues are fully informed and educated in all applicable legal requirements. This is particularly important with respect to anti-bribery and corruption (ABC) legislation. Breaching any of these laws or regulations could have serious consequences for the Group.

- ***Inability to identify and respond to changes in customer needs – Consistent compared to 2020***

This risk could lead to a loss of business because of a failure to respond rapidly to changes in the needs of customers or technology shifts.

- ***Loss of critical supplier – Increased compared to 2020***

This risk is concerned with the impact of the loss of a critical supplier that could lead to logistical difficulties and delayed deliveries

Emerging risks
We are monitoring the current conflict in Ukraine. Our business in the Ukraine is confined to Steam Specialties and is small. Sanctions apply to Russia where our Businesses account for close to 1% of Group revenue. Contingency plans are in place to respond to our announced suspension of trade with, or within, Russia.

2. ALTERNATIVE PERFORMANCE MEASURES

The Group reports under IFRS and also uses alternative performance measures where the Board believe that they help to effectively monitor the performance of the Group, users of the Financial Statements might find them informative and an aid to comparison with our peers. Certain alternative performance measures also form a meaningful element of Executive Directors' variable remuneration. Net debt to EBITDA is also a covenant assessed for external borrowing purposes. A definition of the alternative performance measures included in the Annual Report and a reconciliation to the closest IFRS equivalent are disclosed below.

Adjusted operating profit

Adjusted operating profit excludes items that are considered to be significant in nature and/or quantum and where treatment as an adjusted item provides stakeholders with additional useful information to assess the period-on-period trading performance of the Group and an aid to comparison with our peers. The Group excludes such items including those defined as follows:

- amortisation and impairment of acquisition-related intangible assets;
- impairment of goodwill;
- costs associated with acquisitions and disposals;
- reversal of acquisition-related fair value adjustments to inventory;
- changes in deferred consideration payable on acquisitions;
- profit or loss on disposal of subsidiary;
- significant restructuring costs;
- certain foreign exchange gains and losses on borrowings;
- significant profits or losses on disposal of property; and
- significant plan amendments and/or legal rulings requiring a past service cost or credit for post-retirement benefit plans.

A reconciliation between operating profit as reported under IFRS and adjusted operating profit is given below.

	2021 £m	2020 £m
Operating profit as reported under IFRS	**320.9**	**249.0**
Amortisation of acquisition-related intangible assets	21.4	26.6
Reversal of acquisition-related fair value adjustments to inventory	-	1.0
Restructuring costs	-	4.3
Post-retirement benefit plan in Germany being closed to future accrual	(2.0)	-
Post-retirement benefit plans in the UK and Canada being closed to future accrual	-	(10.5)
Adjusted operating profit	**340.3**	**270.4**

The related tax effects of the above are included as adjustments in taxation as disclosed in Note 5.

Adjusted earnings per share

	2021	2020
Profit for the period attributable to equity holders as reported under IFRS (£m)	**234.6**	**173.6**
Items excluded from adjusted operating profit disclosed above (£m)	19.4	21.4
Tax effects on adjusted items (£m)	(4.3)	(5.8)
Adjusted profit for the period attributable to equity holders (£m)	**249.7**	**189.2**
Weighted average shares (million)	73.7	73.7
Basic adjusted earnings per share	338.9p	256.6p
Diluted weighted average shares (million)	73.9	73.9
Diluted adjusted earnings per share	338.0p	255.8p

Basic adjusted earnings per share is defined as adjusted profit for the period attributable to equity holders divided by the weighted average number of shares in issue. Diluted adjusted earnings per share is defined as adjusted profit for the period attributable to equity holders divided by the diluted weighted average number of shares.

Basic and diluted EPS calculated on an IFRS profit basis are included in Note 6.

Adjusted cash flow

A reconciliation showing the items that bridge between net cash from operating activities as reported under IFRS to an adjusted basis is given below. Adjusted cash from operations is used by the Board to monitor the performance of the Group, with a focus on elements of cashflow, such as Net capital expenditure, which are subject to day-to-day control by the business.

	2021 £m	2020 £m
Net cash from operating activities as reported under IFRS	**273.4**	**259.2**
Acquisition and disposal costs	-	-
Restructuring costs	-	4.3
Net capital expenditure excluding acquired intangibles from acquisitions	(62.1)	(47.4)
Tax paid	78.1	71.9
Repayments of principal under lease liabilities	(11.7)	(12.2)
Adjusted cash from operations	**277.7**	**275.8**

Adjusted cash conversion in 2021 is 82% (2020: 102%). Cash conversion is calculated as adjusted cash from operations divided by adjusted operating profit. The adjusted cash flow is included in the Financial Review on page 27.

Cash generation

Cash generation is one of the Group's key performance indicators used by the Board to monitor the performance of the Group and measure the successful implementation of our strategy. It is one of two financial measures on which Executive Directors' variable remuneration is based.

Cash generation is adjusted operating profit after adding back depreciation and amortisation, less cash payments to pension schemes in excess of the charge to adjusted operating profit, equity settled share plans, net capital expenditure excluding acquired intangibles, working capital changes and repayment of principal under lease liabilities. Cash generation is equivalent to adjusted cash from operations, a reconciliation between this and net cash from operating activities as reported under IFRS is shown on the previous page.

Return on invested capital (ROIC)

ROIC measures the after tax return on the total capital invested in the business. It is calculated as adjusted operating profit after tax divided by average invested capital. Average invested capital is defined as the average of the closing balance at the current and prior year end. Taxation is calculated as adjusted operating profit multiplied by the adjusted effective tax rate.

An analysis of the components is as follows:

	2021 **£m**	**2020*** **£m**
Total equity	1,010.0	852.3
Net debt	190.6	262.9
Total invested capital	**1,200.6**	**1,115.2**
Average invested capital	**1,157.9**	**1,137.9**
Average invested capital (excluding IFRS 16)	**1,108.4**	**1,099.3**
Operating profit as reported under IFRS	320.9	249.0
Adjustments (see adjusted operating profit)	19.4	21.4
Adjusted operating profit	**340.3**	**270.4**
Taxation	(85.5)	(74.4)
Adjusted operating profit after tax	**254.8**	**196.0**
Adjusted operating profit after tax (excluding IFRS 16)	**254.1**	**195.2**
Return in invested capital	**22.0%**	**17.2%**
Return in invested capital (excluding IFRS 16)	**22.9%**	**17.8%**

*Restated following IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements, (Software as a Service (SaaS)) see note 1 for further details.

Return on capital employed (ROCE)

ROCE measures effective management of fixed assets and working capital relative to the profitability of the business. It is calculated as adjusted operating profit divided by average capital employed. Average capital employed is defined as the average of the closing balance at the current and prior year end. More information on ROCE can be found in the Capital Employed and ROCE sections of the Financial Review.

An analysis of the components is as follows:

	2021 £m	2020* £m
Property, plant and equipment	277.4	261.3
Right-of-use assets (IFRS 16)	62.9	36.3
Software & development costs*	38.9	33.4
Prepayments	1.3	1.4
Inventories	201.3	180.1
Trade receivables	272.3	226.3
Other current assets	44.7	31.8
Tax recoverable	15.7	8.1
Trade, other payables and current provisions	(222.2)	(166.3)
Current tax payable	(33.1)	(28.6)
Capital employed	**659.2**	**583.8**
Average capital employed	**621.5**	**589.2**
Average capital employed (excluding IFRS 16)	**571.9**	**550.6**
Operating profit	320.9	249.0
Adjustments (see adjusted operating profit)	19.4	21.4
Adjusted operating profit	**340.3**	**270.4**
Adjusted operating profit (excluding IFRS 16)	**339.2**	**269.3**
Return on capital employed	**54.7%**	**45.9%**
Return on capital employed (excluding IFRS 16)	**59.3%**	**48.9%**

*Restated following IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements, (Software as a Service (SaaS)) see note 1 for further details.

A reconciliation of capital employed to net assets as reported under IFRS and disclosed on the Consolidated Statement of Financial Position is given below.

	2021 £m	2020 £m
Capital employed	**659.2**	**583.8**
Goodwill and acquired intangibles	628.0	665.6
Investment in Associate	-	-
Post-retirement benefits	(44.7)	(98.6)
Net deferred tax	(35.7)	(28.5)
Non-current provisions and long-term payables	(6.2)	(7.1)
Lease liabilities	(60.1)	(34.1)
Net debt	(130.5)	(228.8)
Net assets as reported under IFRS	**1,010.0**	**852.3**

Net debt including IFRS 16 lease liabilities

A reconciliation between net debt and net debt including IFRS 16 is given below. A breakdown of the balances that are included within net debt is given within Note 8. Net debt excludes IFRS 16 lease liabilities to be consistent with how net debt is defined for external debt covenant purposes, as well as to enable comparability with prior years

	2021 £m	2020 £m
Net debt	**130.5**	**228.8**
IFRS 16 lease liabilities	60.1	34.1
Net debt and IFRS 16 lease liabilities	**190.6**	**262.9**

Net debt to earnings before interest, tax, depreciation and amortisation (EBITDA)
To assess the size of the net debt balance relative to the size of the earnings for the Group we analyse net debt as a proportion of earnings before interest, tax, depreciation and amortisation (EBITDA). EBITDA is calculated by adding back depreciation and amortisation of owned property, plant and equipment, software and development costs to adjusted operating profit. Net debt is calculated as Cash & cash equivalents less Bank overdrafts and external borrowings (excluding IFRS 16 lease liabilities). The net debt to EBITDA ratio is calculated as follows:

	2021 £m	2020 £m
Adjusted operating profit	**340.3**	**270.4**
Depreciation and amortisation of property, plant and equipment, software and development	36.2	36.7
EBITDA	**376.5**	**307.1**
Net debt	130.5	228.8
Net debt to EBITDA	**0.3**	**0.7**

The components of net debt are disclosed in Note 8.

Organic measures
As we are a multi-national Group of companies, who trade in a large number of foreign currencies and also acquire and sometimes dispose of companies, we also refer to organic performance measures throughout the News Release. These strip out the effects of the movement of foreign currency exchange rates and of acquisitions and disposals. The Board believe that this allows users of the accounts to gain a further understanding of how the Group has performed.

Exchange translation movements are assessed by re-translating prior period reported values to current period exchange rates. Exchange transaction impacts on operating profit are assessed on the basis of transactions being at constant currency between years.

The incremental impact of any acquisitions and disposals that occurred in either the current period or prior period are excluded from the results of the current period at current period exchange rates.

The organic percentage movement is calculated as the organic movement divided by the sum of the prior period and exchange.

The organic bps change in adjusted operating profit margin is the difference between the current period margin excluding acquisitions and disposals and the prior period margin at current period exchange rates.

A reconciliation of the movement in revenue and adjusted operating profit compared to the prior period is given below.

	2020	Exchange	Organic	Acquisitions and disposal	2021	Organic	Reported
	£m	£m	£m	£m	£m		
Revenue	1,193.4	(41.0)	192.1	-	1,344.5	+17%	+13%
Adjusted operating profit	270.4	(11.1)	81.0	-	340.3	+31%	+26%
Adjusted operating profit margin	22.7%				25.3%	+280 bps	+260 bps

A reconciliation of the movement in revenue compared to the pre-pandemic level in 2019 is given below.

	2019	Exchange	Organic	Acquisitions and disposal	2021	Organic	Reported
	£m	£m	£m	£m	£m		
Revenue	1,242.4	(67.8)	155.2	14.7	1,344.5	+13%	+8%

The term 'sales' is used interchangeably with 'revenue' when describing the financial performance of the business.

The term 'real terms' is defined as the growth in revenue at constant currency excluding the impacts of price inflation.

Drop through is calculated as the organic growth in adjusted operating profit divided by the organic growth in revenue.

The reconciliation for each segment is included in the Review of Operations on pages 13, 16 and 19.

Inflation adjusted sales
For the purpose of calculating the prior year carbon emission intensity ratio, inflation adjusted sales at constant currency reflects the prior year reported revenue adjusted for the impact of exchange, as shown above, as well as the impact of the global OECD inflation rate for the current year. The revenue used for the current year ratio is as reported.

3. SEGMENTAL REPORTING

As required by IFRS 8 (Operating Segments), the following segmental information is presented in a consistent format with management information considered by the Board.

No changes to the structure of operating segments have been made during the current period.

Analysis by operating segment

2021

	Revenue £m	Total operating profit £m	Adjusted operating profit £m	Adjusted operating margin %
Steam Specialties	754.9	186.8	188.7	25.0%
Electric Thermal Solutions	181.3	11.1	24.0	13.2%
Watson-Marlow	408.3	145.4	150.0	36.7%
Corporate expenses		(22.4)	(22.4)	
Total	**1,344.5**	**320.9**	**340.3**	25.3%
Net financing expense		(6.4)	(6.4)	
Share of Loss of Associate		-	-	
Profit before tax		**314.5**	**333.9**	

2020

	Revenue £m	Total operating profit £m	Adjusted operating profit £m	Adjusted operating margin %
Steam Specialties	694.1	157.8	154.3	22.2%
Electric Thermal Solutions	178.0	4.8	24.6	13.8%
Watson-Marlow	321.3	102.2	107.3	33.4%
Corporate expenses		(15.8)	(15.8)	
Total	**1,193.4**	**249.0**	**270.4**	22.7%
Net financing expense		(8.7)	(8.7)	
Share of Loss of Associate		(0.2)	(0.2)	
Profit before tax		**240.1**	**261.5**	

The following table details the split of revenue by geography for the combined Group:

	2021 £m	2020 £m
Europe, Middle East and Africa	563.3	507.8
Asia Pacific	334.2	288.5
Americas	447.0	397.1
Total revenue	**1,344.5**	**1,193.4**

Revenue generated by Group companies based in the USA is £342.4 million (2020: £303.0 million), in China is £181.6 million (2020: £134.6 million), in Germany is £118.2 million (2020: £109.8 million), in the UK is £99.6 million (2020: £90.2 million) and the rest of the world is £602.7 million (2020: £555.8 million).

The total operating profit for each period includes certain items as analysed below:

2021

	Amortisation of acquisition-related intangible assets	Germany pension plan closed to future accrual	Total
	£m	£m	£m
Steam Specialties	(3.9)	2.0	(1.9)
Electric Thermal Solutions	(12.9)	-	(12.9)
Watson-Marlow	(4.6)	-	(4.6)
Total	**(21.4)**	**2.0**	**(19.4)**

2020

	Amortisation of acquisition-related intangible assets	Restructuring costs	UK and Canada pension plans closed to future accrual	Reversal of acquisition-related fair value adjustments to inventory £m	Total
	£m	£m	£m		£m
Steam Specialties	(5.0)	-	8.5	-	3.5
Electric Thermal Solutions	(14.5)	(4.3)	-	(1.0)	(19.8)
Watson-Marlow	(7.1)	-	2.0	-	(5.1)
Total	**(26.6)**	**(4.3)**	**10.5**	**(1.0)**	**(21.4)**

Net financing income and expense

	2021			2020		
	Income	Expense	Net	Income	Expense	Net
	£m	£m	£m	£m	£m	£m
Steam Specialties	3.0	(2.3)	0.7	1.3	(2.4)	(1.1)
Electric Thermal Solutions	-	(0.2)	(0.2)	-	(0.3)	(0.3)
Watson-Marlow	0.1	(0.5)	(0.4)	-	(0.4)	(0.4)
Corporate expenses	0.3	(6.8)	(6.5)	0.1	(7.0)	(6.9)
Total net financing expense	**3.4**	**(9.8)**	**(6.4)**	**1.4**	**(10.1)**	**(8.7)**

Net assets

	2021		2020	
	Assets	Liabilities	Assets*	Liabilities
	£m	£m	£m	£m
Steam Specialties	658.0	(182.1)	637.1	(198.0)
Electric Thermal Solutions	536.9	(33.0)	530.0	(27.5)
Watson-Marlow	331.8	(57.9)	269.1	(46.5)
	1,526.7	(273.0)	1,436.2	(272.0)
Liabilities	(273.0)		(272.0)	
Net deferred tax	(35.7)		(28.5)	
Net tax payable	(17.4)		(20.5)	
Net debt	(190.6)		(262.9)	
Net assets	**1,010.0**		**852.3**	

*Restated following IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements, (Software as a Service (SaaS)) see note 1 for further details.

Non-current assets in the UK were £231.2 million (2020: £203.4 million), in the USA were £345.6 million (2020: £350.8 million), in Germany were £154.6 million (2020: £168.9 million), in France were £150.5 million (2020: £150.9 million) and in the rest of the world were £177.6 million (2020: £174.9 million).

Capital additions, depreciation, amortisation and impairment

	2021		2020	
	Capital additions	Depreciation, amortisation and impairment	Capital additions	Depreciation, amortisation and impairment
	£m	£m	£m	£m
Steam Specialties	35.6	33.9	34.5	36.4
Electric Thermal Solutions	16.6	18.3	3.8	20.8
Watson-Marlow	51.0	16.8	19.6	18.2
Group total	**103.2**	**69.0**	**57.9**	**75.4**

Capital additions include property, plant and equipment of £52.8 million (2020: £42.0 million), of which £nil (2020: £nil) was from acquisitions in the period, and other intangible assets of £11.3 million (2020: £7.6 million) of which £nil (2020: £nil) relates to acquired intangibles from acquisitions in the period. Right-of-use asset additions of £39.1 million occurred during the 12-month period to 31st December 2021, all of which relates to new leases entered into during 2021. Capital additions split between the UK and rest of the world are UK £54.2 million (2020: £28.2 million) and rest of the world £49.0 million (2020: £29.7 million).

4. NET FINANCING INCOME AND EXPENSE

	2021	2020
	£m	£m
Financial expenses:		
Bank and other borrowing interest payable	(7.4)	(7.4)
Interest expense on lease liabilities	(1.1)	(1.2)
Net interest on pension scheme liabilities	(1.3)	(1.5)
	(9.8)	(10.1)
Financial income:		
Bank interest receivable	3.4	1.4
Net financing expense	**(6.4)**	**(8.7)**
Net pension scheme financial expense	(1.3)	(1.5)
Interest expense on lease liabilities	(1.1)	(1.2)
Net bank interest	(4.0)	(6.0)
Net financing expense	**(6.4)**	**(8.7)**

5. TAXATION

Analysis of charge in period	2021 Adjusted £m	2021 Adj't £m	2021 Total £m	2020 Adjusted £m	2020 Adj't £m	2020 Total £m
UK corporation tax:						
Current tax on income for the period	8.7	-	8.7	13.8	-	13.8
Adjustments in respect of prior periods	(1.7)	-	(1.7)	(3.1)	-	(3.1)
	7.0	-	7.0	10.7	-	10.7
Foreign tax:						
Current tax on income for the period	74.5	-	74.5	60.4	-	60.4
Adjustments in respect of prior periods	(1.5)	-	(1.5)	0.6	-	0.6
	73.0	-	73.0	61.0	-	61.0
Total current tax charge	80.0	-	80.0	71.7	-	71.7
Deferred tax – UK	3.7	(0.3)	3.4	2.7	(0.3)	2.4
Deferred tax – Foreign	0.2	(4.0)	(3.8)	(2.4)	(5.5)	(7.9)
Tax on profit on ordinary activities	**83.9**	**(4.3)**	**79.6**	**72.0**	**(5.8)**	**66.2**

The Group's future tax charge is likely to be affected by the proportion of profits arising and the effective tax rates in the various territories in which the Group operates.

The Group's tax charge includes a credit of £4.3 million in relation to certain items excluded from adjusted operating profit (as disclosed in Note 2). The tax impacts of these items are:

- Amortisation of acquisition-related intangible assets (£4.9 million credit)
- Closure of defined benefit German pension scheme to future accrual (£0.6 million debit)

Excluding these adjustments, the tax on profit and the effective tax rate are £83.9 million and 25.1% respectively.

The UK deferred tax assets and liabilities at 31st December 2021 that are expected to reverse before 1st April 2023 have been calculated based upon the rate of 19% whilst the UK deferred tax assets and liabilities expected to reverse on or after 1st April 2023 have been calculated based upon the rate of 25%.

In October 2017, the European Commission (EC) opened a State Aid investigation into the UK's Controlled Foreign Company (CFC) regime. In April 2019, the EC published its final decision that the UK CFC Finance Company Exemption (FCE) constituted State Aid in certain circumstances, following which the UK Government appealed the decision. Similar to other UK Groups, in October 2019, the Group submitted its own appeal. The Group's benefit from the FCE in the period from 1st January 2013 to 31st December 2021 is approximately £8.7 million, including compound interest. During 2021, the Group received, paid and appealed Charging Notices totalling £4.9 million, assessed for the period from 1st January 2017 to 31st December 2018. The Group expects to recover this in the event of a successful appeal and has recognised a receivable for the full amount at the year-end balance sheet date. The Group has not received a Charging Notice for the period prior to 1st January 2017, the benefit for this period being £2.8 million. Her Majesty's Revenue & Customs has enquired into the benefit received during 2019, which the Group estimates to be £1.0 million. No provisions have been recognised at the year-end balance sheet date for either the Charging Notice amounts or for the estimates for the other periods.

6. EARNINGS PER SHARE

	2021	2020
Profit attributable to equity shareholders (£m)	234.6	173.6
Weighted average shares (million)	73.7	73.7
Dilution (million)	0.2	0.2
Diluted weighted average shares (million)	73.9	73.9
Basic earnings per share	**318.3p**	**235.5p**
Diluted earnings per share	**317.5p**	**234.8p**

Basic and diluted earnings per share calculated on an adjusted profit basis are included in Note 2. The dilution is in respect of unexercised share options and the Performance Share Plan.

7. DIVIDENDS

	2021 £m	2020 £m
Amounts paid in the year:		
Final dividend for the year ended 31st December 2020 of 84.5p (2020: 78.0p) per share	62.3	57.5
Interim dividend for the year ended 31st December 2021 of 38.5p (2020: 33.5p) per share	28.4	24.7
Total dividends paid	**90.7**	**82.2**
Amounts arising in respect of the year:		
Interim dividend for the year ended 31st December 2021 of 38.5p (2020: 33.5p) per share	28.4	24.7
Proposed final dividend for the year ended 31st December 2021 of 97.5p (2020: 84.5p) per share	71.8	62.3
Total dividends arising	**100.2**	**87.0**

8. ANALYSIS OF CHANGES IN NET DEBT, INCLUDING CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

2021

	At 1st Jan 2021 £m	Cash flow £m	Acquired debt* £m	Exchange movement £m	At 31st Dec 2021 £m
Current portion of long-term borrowings	(0.6)				(59.6)
Non-current portion of long-term borrowings	(452.2)				(289.9)
Short-term borrowings	-				-
Total borrowings	**(452.8)**				**(349.5)**
Comprising:					
Borrowings	(452.8)	77.5	-	25.8	(349.5)
Changes in liabilities arising from financing	(452.8)	77.5	-	25.8	(349.5)
Cash at bank	246.2	35.7	-	(7.3)	274.6
Bank overdrafts	(22.2)	(34.3)	-	0.9	(55.6)
Net cash and cash equivalents	**224.0**	**1.4**	**-**	**(6.4)**	**219.0**
Net debt	**(228.8)**	**78.9**	**-**	**19.4**	**(130.5)**
Lease liabilities	(34.1)	11.7	(39.1)	1.4	(60.1)
Net debt and lease liabilities	(262.9)	90.6	(39.1)	20.8	(190.6)

* Debt acquired includes both debt acquired due to acquisition, and debt recognised on the balance sheet due to entry into new leases under IFRS 16.

2020

	At 1st Jan 2020 £m	Cash flow £m	Acquired debt* £m	Exchange movement £m	At 31st Dec 2020 £m
Current portion of long-term borrowings	(34.3)				(0.6)
Non-current portion of long-term borrowings	(429.2)				(452.2)
Short-term borrowings	-				-
Total borrowings	**(463.5)**				**(452.8)**
Comprising:					
Borrowings	(463.5)	36.7	-	(26.0)	(452.8)
Changes in liabilities arising from financing	(463.5)	36.7	-	(26.0)	(452.8)
Cash at bank	330.6	(84.4)	-	-	246.2
Bank overdrafts	(162.3)	140.0	-	0.1	(22.2)
Net cash and cash equivalents	**168.3**	**55.6**	**-**	**0.1**	**224.0**
Net debt	**(295.2)**	**92.3**	**-**	**(25.9)**	**(228.8)**
Lease liabilities	(38.9)	12.2	(7.1)	(0.3)	(34.1)
Net debt and lease liabilities	(334.1)	104.5	(7.1)	(26.2)	(262.9)

* Debt acquired includes both debt acquired due to acquisition, and debt recognised on the balance sheet due to entry into new leases under IFRS 16.

The cash flow for borrowings of £77.5 million relate to repayments of €90million on the €160million term loan.

At 31st December 2021 total lease liabilities consist of £11.2 million (2020: £10.3 million) short-term and £48.9 million (2020: £23.8 million) long-term.

9. PURCHASE OF BUSINESSES

In January 2022, the Group acquired 100% of the share capital of a digitally enabled, global energy consulting and optimisation specialist, Cotopaxi Limited. Cotopaxi is a UK company and its digital solutions experience in steam installations will accelerate Steam Specialties' objective to connect to its customers' steam systems and analyse their data. In the year ended 31st December 2020, Cotopaxi reported revenues of £2.2 million with pre-pandemic revenues of £4.8 million.

Total consideration on a cash-free, debt-free basis at the acquisition date was £12.8 million with no further amounts deferred or contingent on future performance. Due to the proximity of the acquisition date to the reporting date, finalisation of the fair value of net assets on acquisition and the associated accounting in line with IFRS 3 has not yet been finalised. Further details will be provided in the 2022 Half Year Results.

10. RESPONSIBILITY STATEMENT OF THE DIRECTORS ON THE ANNUAL REPORT

The Responsibility Statement below has been prepared in connection with the Company's full Annual Report for the year ending 31st December 2021. Certain parts thereof are not included within this announcement.

We confirm to the best of our knowledge:

- the Financial Statements, prepared in accordance with IFRS as adopted by the UK, give a true and fair view of the assets, liabilities, financial position and profit and loss of the Company and the undertakings included in the consolidation taken as a whole;
- the Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face; and
- the Annual Report and Financial Statements, taken as a whole, are fair, balanced and understandable and provide the information necessary to assess the Company's performance, business model and strategy.

This Responsibility Statement was approved by the Board of Directors on 9th March 2022 and is signed on its behalf by:

N.J. Anderson, Group Chief Executive

N.B. Patel, Chief Financial Officer

11. CAUTIONARY STATEMENT

All statements other than statements of historical fact included in this document, including, without limitation, those regarding the financial condition, results, operations and businesses of Spirax-Sarco Engineering plc and its strategy, plans and objectives and the markets and economies in which it operates, are forward-looking statements. These forward-looking statements which reflect management's assumptions made on the basis of information available to it at this time, involve known and unknown risks, uncertainties and other important factors which could cause the actual results, performance or achievements of Spirax-Sarco Engineering plc or the markets and economies in which we operate to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Spirax-Sarco Engineering plc and its Directors accept no liability to third parties in respect of this report save as would arise under English law. Accordingly, any liability to a person who has demonstrated reliance on any untrue or misleading statement or omission shall be determined in accordance with schedule 10A of the Financial Services and Markets Act 2000. It should be noted that schedule 10A contains limits on the liability of the Directors of Spirax-Sarco Engineering plc so that their liability is solely to Spirax-Sarco Engineering plc.

12. EXCHANGE RATE IMPACTS

Whilst not an IFRS disclosure or part of the audited accounts, set out below is an additional disclosure that highlights the movements in a selection of exchange rates between 2020 and 2021.

Exchange rates to sterling have been as follows:

	Average 2021	Average 2020	Change %	Closing 2021	Closing 2020	Change %
Bank of England sterling index	81.4	78.3	-4%	82.5	78.5	-5%
US Dollar	1.37	1.29	-6%	1.35	1.37	+1%
Euro	1.16	1.13	-3%	1.19	1.12	-6%
Renminbi	8.85	8.93	+1%	8.60	8.94	+4%
Won	1,569	1,524	-3%	1,607	1,485	-8%
Real	7.41	6.67	-11%	7.54	7.08	-6%
Argentine Peso	130.24	91.65	-42%	138.92	114.92	-21%

A negative movement indicates a strengthening in sterling versus that currency. When sterling strengthens against other currencies in which the Group operates, the Group incurs a loss on translation of the financial results into sterling.

On a translation basis, sales decreased by 3.4% and adjusted operating profit decreased by 3.8%, while transactional currency impacts also decreased profit, giving a total reduction to profit from currency movements of 4.1%.