MANAGEMENT REPORT

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DEAR SHAREHOLDER

2022 was an extraordinary year for the Komax Group in many respects. The combination with the Schleuniger Group and the war in Ukraine had a significant impact on the development of business. Record figures were achieved for both order intake and revenues, to the extent that the mid-term targets set for 2023 were exceeded a year early. Customers were eager to further increase the degree of automation in their factories. This laid the basis for a successful financial year for the Komax Group in a turbulent market environment.

The 2022 reporting year was significantly influenced by a number of factors: the combination of Komax and Schleuniger, the war in Ukraine, and the trend toward greater automation in wire processing. Order intake therefore increased substantially to CHF 678.1 million, a rise of 40.6% on the previous year (2021: CHF 482.4 million). Komax received orders for over CHF 599.7 million, while Schleuniger contributed CHF 78.4 million between its consolidation at the start of September and the end of the financial year. Even without Schleuniger, Komax would have exceeded its previous year's result by 24.3% and surpassed the previous record order intake (CHF 496.7 million, in 2018) by more than CHF 100 million.

Impact of the war in Ukraine

The difficult supply chain situation in the automotive industry was exacerbated in the spring of 2022 by the war in Ukraine, which is a significant center of wire manufacturing. In order to compensate for reduced Ukrainian production capacity against the backdrop of the war and secure their ability to supply automotive producers reliably, wire harness manufacturers built up substitute capacity in other countries. As a

result, the Komax Group received a large number of extraordinary orders in the first half of the year.

Record revenues in a difficult market environment

The global supply chain situation proved a challenge for the Komax Group, too. Overall, the Group coped with this challenge very well, but there were nonetheless some delays, and not all orders could be processed within the accustomed timeframe. The Komax Group posted a record figure for revenues in 2022 of CHF 606.3 million (2021: CHF 421.1 million), an increase of 44.0% on the previous year.

Of this amount, Komax contributed CHF 522.2 million, while Schleuniger contributed CHF 84.1 million in the four months of the financial year following its consolidation. Here, too, a record figure would have been posted even without the Schleuniger Group. The factors behind the revenue increase were very strong organic growth (26.7%), acquisition-driven growth (20.1%), and a negative foreign currency effect (–2.8%).

Automation trend drives growth

The trend toward higher automation in wire processing continued in all regions in the year under review – both in the automotive market segment, where the Komax Group generates around 75% of its revenues, and in the other market segments. Customers are aware that automation not only delivers better long-term cost efficiency compared to manual wire processing, but also helps them to meet increasing quality requirements. In keeping with this trend, the Komax Group grew in all regions: Africa (+37.4%), Europe (+51.2%), Asia/Pacific (+34.3%), and North/South America (+45.4%).

Further increase in profitability

The Komax Group also improved its profitability in 2022, which was due in particular to the higher revenues and advantageous product mix associated with orders received in connection with the war in Ukraine. Operating profit (EBIT) rose accordingly by 60.1% for the full year of 2022, to CHF 71.7 million (2021: CHF 44.8 million). Group earnings after taxes (EAT) increased by 70.4% to CHF 51.8 million (2021: CHF 30.4 million). The Schleuniger Group contributed CHF 5.0 million to EBIT and CHF 2.6 million to EAT.

Combination with Schleuniger secures competitiveness

The combination of Komax and Schleuniger, which was completed at the end of August 2022, marked a historic moment for both corporate groups. This combination brought eleven companies with strong market positions and locations spread across three continents into the Komax Group, expanding it significantly. Together with Schleuniger, opportunities that arise in the market can now be harnessed better and more rapidly. The combination supports all four strategic priorities of the Komax Group, and therefore will secure its competitiveness over the long term. In addition, the combination has increased the stability of the shareholder base thanks to a new anchor shareholder with a long-term focus: Metall Zug AG, the former owner of the Schleuniger Group. Jürg Werner was appointed to the Board of Directors as Metall Zug AG's representative at the 2022 Annual General Meeting.

Komax and Schleuniger have been growing together gradually over the last few months and doing everything in their power to ensure that the needs of customers continue to be optimally met during this integration phase. At the same time, management is developing a new target picture for the Komax Group, along with the associated strategy. This is expected to be communicated at the end of September, together with the new mid-term targets.

Enhanced innovative strength

Thanks to the combination, the Komax Group has acquired more than 1 000 new specialists, so it now has even greater expertise in various areas, not least research and development. In 2022, the Komax Group channeled CHF 59.0 million or 9.7% of revenues (2021: 9.8%) into research and development. The Komax Group will take advantage of its combined innovative strength to offer its customers new automation solutions even more quickly in the future.

Solid financial foundation

The Komax Group already had a robust financial base, but this has been strengthened further through the combination with the Schleuniger Group. As at 31 December 2022, shareholders' equity totaled CHF 416.6 million (2021: CHF 264.9 million), with the equity ratio coming in at 53.2% (2021: 51.4%). Free cash flow rose sharply thanks

to improved business development, amounting to CHF 17.6 million (2021: CHF –5.5 million). Net debt rose slightly from CHF 98.4 million (2021) to CHF 105.5 million in the year under review. This solid foundation enables the Komax Group to systematically pursue opportunities to develop the Group further and offers security in challenging times.

In order to secure freedom of financial maneuver in the future, the Komax Group signed a new syndicated loan agreement at the end of 2022, which will run until January 2028. The credit facility has been increased from CHF 187 million to CHF 250 million – with the option of adding a further CHF 60 million. In addition to the syndicated loan, the Komax Group has access to bilateral credit lines that together amount to a maximum of CHF 60 million (previously CHF 30 million).

Distribution of CHF 5.50

As a result of the Group's success in the 2022 financial year, the Board of Directors is proposing to the Annual General Meeting an increase in the dividend to CHF 5.50 (previous year: CHF 4.50). This equates to a payout ratio of 54.5%. The Komax Group is therefore adhering to its strategic target of distributing 50–60% of EAT to shareholders. Half of this figure of CHF 5.50 will be distributed from capital contribution reserves, and will therefore be tax-free for natural persons domiciled in Switzerland who hold the shares as part of their private assets.

Outlook

The Komax Group started off 2023 with a record order backlog. At the end of 2022 the book-to-bill ratio was 1.12.

The Komax Group is confident that the trend towards automation will persist, and hence so, too, the robust demand for the solutions offered by the company. In addition, the Komax Group is expecting the supply chain situation to gradually improve in 2023, which would help the high order backlog to be worked down over the coming months.

If Schleuniger had contributed twelve months to the Komax Group's 2022 results instead of four, revenues would have amounted to a total of around CHF 770 million. Despite the fact that the extraordinary revenues of approximately CHF 70 million triggered by the war in Ukraine will no longer be a feature of results in 2023, the Komax Group is anticipating revenues that are at least on a par with 2022 figures (around CHF 770 million). This is assuming that there are no significant changes in the market environment and in knowing that visibility is limited to a few months. The EBIT margin depends very much on the product mix. Given that this is unlikely to be as favorable in 2023 as it was in 2022, the Komax Group is expecting an EBIT margin in the region of 11%.

Yours sincerely,

Dr. Beat Kälin
Chairman of the Board of Directors

Matijas Meyer
CEO

9 March 2023

GROWING TOGETHER

The combination of Komax and Schleuniger brings together two successful companies in the sphere of automated wire processing, thereby guaranteeing their long-term competitiveness.

For the Komax Group and the Schleuniger Group, the market for automated wire processing offers many opportunities. However, these require significant investment, personnel resources, and considerable expertise. In order to exploit these opportunities swiftly and efficiently, the two companies joined forces with effect from 30 August 2022. Thanks to their combined power to innovate, customers can be offered new solutions for permanently increasing their degree of automation more rapidly.

Schleuniger Group headquarters in Thun, Switzerland.

Who are Schleuniger?

The Schleuniger Group is a global technology company and an innovative provider of solutions for the wire processing and testing industry. Prior to the combination, Schleuniger was the world's second-largest provider in the area of automation solutions for the wire processing industry, after Komax. The company's strengths lie above all in the area of cutting and stripping machinery, and range right through to fully automatic machines for the processing of micro-coaxial and coaxial cables, among other things.

Founded in the Swiss town of Thun in 1975, Schleuniger and its subsidiaries, including adaptronic, Cirris, and DilT, now employ more than 1 000 people worldwide. With branches in Europe, North America, China, and Japan, as well as a network of distribution and service partners all over the world, Schleuniger primarily supplies customers in the automotive industry. In addition, the company is active in sectors such as information and communications technology, industrial and consumer electronics, aerospace, transportation, and medical technology.

Two successful companies grow together

At the time of the combination, Schleuniger was around half the size of Komax in terms of revenues and headcount, but was no less successful. Both companies have carved out leading positions over the last few decades and built up strong brands. Both Schleuniger and Komax embody Swiss values, and base their success on a commitment to quality and innovative tech-

WHY DOES THE COMBINATION OF KOMAX AND SCHLEUNIGER MAKE SENSE?

- Key trends such as automation, e-mobility, and the rising significance of the automotive market in Asia offer a number of growth and differentiation opportunities. By joining forces, the two companies can exploit these earlier and in a more targeted way.
- Customers will receive innovative solutions more quickly, which will allow them to increase the degree of automation further. They can also rely on proven sales and service networks, along with an optimal level of customer service.
- A high level of investment is required to satisfy the market needs of customers. The bundling of expertise will facilitate new solutions for growth in key markets.
- Further growth requires skilled personnel. Thanks to the additional expertise and resources gained, the combination will guarantee the competitiveness of the Komax Group in the longer term.
- Employees, meanwhile, will benefit from additional development opportunities in a larger corporate group, which will be looking to create more jobs and training positions.
- The Komax Group will generate additional value for shareholders by securing its long-term competitiveness and by harnessing synergies and economies of scale going forward. Shareholders will also benefit from the stability of the anchor shareholder Metall Zug AG, with its long-term orientation.

Komax and Schleuniger colleagues enjoying a chat.

Employees at a get-together.

nologies. Their corporate cultures are similar, as are the values espoused by the two companies. Everything is in place for a successful integration.

The Komax Group is reliant on its qualified workforce if it is to achieve its targets. For that reason, it attaches the utmost importance to transparent communication when it comes to the integration process. This process is being actively accompanied by regular webinars, video messages from the CEO of the Komax Group, and get-togethers at which employees of the previously separate companies can get to know each other both professionally and personally. The focus here is on sharing experiences, learning from one another, and growing together.

“The combination will allow us to react to key trends appropriately and with the necessary speed in the future, which will in turn further increase our competitiveness. As a result, the customers of the merged company will continue to have a reliable partner that will deliver impressive and innovative products and services.”

Matijas Meyer, CEO Komax Group

Combination through quasi-merger

From 2008 onwards, the Schleuniger Group was the Wire Processing division of the Swiss industrial group of companies Metall Zug AG. Following detailed discussions and intensive negotiations, Komax and Metall Zug AG agreed to amalgamate the two companies Komax and Schleuniger by means of a quasi-merger. The companies announced this intention on 9 February 2022.

To finance the combination, the Komax Group proposed to the Annual General Meeting of Shareholders of 13 April 2022 the creation of new shares by means of a capital increase. Thanks to the approval of the capital increase by the General Meeting, Komax Holding AG was able to create 1 283 333 new shares. Closing on the combination became effective in August 2022, after the last outstanding competition authority issued its approval at the end of July. This involved the newly created shares being allocated to Metall Zug AG in exchange for the shares in Schleuniger, thereby giving the former a 25% stake in Komax Holding AG. As new anchor shareholder of the Komax Group, Metall Zug AG pursues a long-term investment strategy. In order to underscore this point, the companies agreed a six-year lock-up period for the package of shares in question. The newly created shares traded on SIX Swiss Exchange for the first time on 31 August 2022, with the Schleuniger Group being consolidated with effect from September 2022.

Within the framework of the capital increase, the Annual General Meeting passed a resolution rescinding the 15% voting rights restriction in the Articles of Association of Komax Holding AG, thereby strengthening corporate governance. Furthermore, Jürg Werner, the former Chairman of the Board of Directors of Schleuniger AG, was elected as an additional member of the Board of Directors of Komax Holding AG (see page 75).

The Komax Group will now analyze the new status quo in detail following the combination, and develop new targets along with the corresponding strategy. On this basis, it will define new mid-term financial targets, which are then expected to be communicated at the Investors’ Day on 28 September 2023.

THE DIFFERENCE BETWEEN A MERGER AND A QUASI-MERGER

Unlike a conventional merger under the Swiss Mergers Act, whereby two companies are merged to form a single company, a quasi-merger means that the two legal entities remain in place. The merger is effected by one company acquiring the shares of the other company and the acquired company becomes a subsidiary of the acquiring company.

OVERVIEW OF THE COMBINATION OF KOMAX AND SCHLEUNIGER

BEFORE QUASI-MERGER

Komax Holding AG
3 850 000 shares

Komax Group companies

Metall Zug AG

holds 100% of Schleuniger AG shares

Schleuniger AG

Schleuniger Group companies

Approval of relevant competition authorities and closing

AFTER QUASI-MERGER

Komax Holding AG
5 133 333 shares

Metall Zug AG
holds 25% of Komax Holding AG shares

holds 100% of Schleuniger AG shares

Schleuniger AG

Schleuniger Group companies

Komax Group companies

Proposal to Annual General Meeting
Creation of 1 283 333 new shares of Komax Holding AG by means of a capital increase

Exchange of shares
Metall Zug AG receives 1 283 333 shares in exchange for 100% of the shares of Schleuniger AG

New anchor shareholder
Metall Zug AG now has a 25% stake in Komax Holding AG. The parties have agreed a six-year lock-up period.

9 Feb 2022	13 Apr 2022	27 Jul 2022	30 Aug 2022	31 Aug 2022	1 Sep 2022	28 Sep 2023
Announcement of intention to carry out quasi-merger of Komax and Schleuniger	Annual General Meeting – Capital increase – Rescinding of 15% voting rights restriction – Election of Jürg Werner to the Komax Board of Directors of Komax Holding AG	Communication of granted clearance from relevant competition authorities	Closing of quasi-merger	Start of trading of additional shares on SIX Swiss Exchange	Consolidation of Schleuniger Group	Communication of new strategy on Investors' Day

Review and approval of transaction by relevant competition authorities

Combination of Komax and Schleuniger and commencement of shared business activities, development of a new strategy

INTERVIEW

The Komax Group performed very well in 2022 despite a turbulent market environment, and is well positioned for success in the future following the combination with Schleuniger.

Beat Kälin, how would you assess the 2022 financial year?
Beat Kälin: It was definitely a year that will go down in the history books for the Komax Group. Firstly, because we have never recorded an order intake and revenues of this magnitude before. And secondly, because of the long-term significance of our combination with Schleuniger.

The combination took many people by surprise. How did it come about?
Beat Kälin: Various trends in our market offer numerous opportunities, such as e-mobility, the shift of the automotive market to Asia, and automation generally. A high level of investment is essential if we are to consistently exploit the growth opportunities on offer. Komax and Schleuniger are in the same situation in this respect. Both are successful, healthy companies that nevertheless need to prioritize the specific trends they want to pursue based on their available financial and personnel resources.

And what are you hoping to get from the combination of the two companies?
Beat Kälin: It will strengthen our competitiveness over the long term, as we will have additional expertise and resources with which to leverage the relevant trends. Or, to put it another way: It has given us extra resources to bring new solutions to the market more rapidly and thereby meet the needs of our customers even better – and on a broader basis.

Matijas Meyer, let's talk about the figures for 2022. How satisfied are you with these results?
Matijas Meyer: We've been confronted by a challenging market environment for a number of years now. So to be able to unveil record figures is an extraordinary achievement, and one that pleases me greatly. This result was possible thanks to the hard work and dedication of our employees. On behalf of the Executive Committee, I would like to thank all those who have worked relentlessly to meet the needs of our customers and deal with the various challenges on a daily basis along the way.

What challenges are you referring to?
Matijas Meyer: As in previous years, the coronavirus pandemic and supply chain difficulties proved significant obstacles. The course of the pandemic had an impact on our business activity in Asia in particular. As a result of lockdowns, customer visits were heavily restricted or even impossible for a prolonged period of time. What's more, the workforce at our production site in Shanghai was directly affected by the city being locked down for many weeks. They coped with this situation admirably. A number of employees even spent part of the lockdown period at our location in Shanghai so as to be able to continue their work.

And what about the supply chain situation? Any improvement on the horizon?
Matijas Meyer: Some aspects of our procurement situation improved in the second half of the year. But there are still several components that are in short supply and subject to long delivery times. It was above all thanks to the great efforts and expertise of our employees on the procurement side that we were able to continue to provide a high level of reliability on deliveries despite all the difficulties. Particularly bearing in mind the extraordinary situation we faced in the first half of the year.

Chairman of the Board of Directors Beat Kälin (left) in discussion with CEO Matijas Meyer.

How do you mean?
Matijas Meyer: We came into 2022 with a strong order book. So we had plenty on our plate from the start, and there was considerable pressure on our specialists to source the necessary components in the required timeframe. And when the war then started in Ukraine, the challenges faced by our production planning teams multiplied in just a few days.

Can you be more specific?
Matijas Meyer: As a large number of wire harnesses for European automotive manufacturers are produced in Ukraine, these companies were very concerned that they would not be able to acquire the wire harnesses they needed in a timely manner. To mitigate this problem, wire manufacturers began building up substitute capacity in other countries as quickly as possible – in Eastern Europe and North Africa in particular. But to install that capacity they also needed numerous wire processing machines. For us this meant a deluge of orders in a single month that we would ordinarily expect across an entire quarter. And of course, the delivery urgency was extreme. This in turn required us to ramp up our production capacity hugely within a very short space of time, and to find a way to procure even more of those components that were already in short supply. I was impressed and enormously pleased by the flexibility and dedication our workforce showed in this situation.

Were you able to process all these orders?
Matijas Meyer: The trend toward greater automation and the war in Ukraine triggered an extremely high order intake. And with the current supply chain situation, production volumes cannot simply be increased by any amount just like that. This meant that we had a high book-to-bill ratio of 1.12 at the end of 2022, which gives us confidence when it comes to our operating result for the first half of 2023.

“This result would not have been possible without the hard work and dedication of our employees.”

Matijas Meyer, CEO

In addition to the order intake and revenues, the EBIT margin also rose in 2022. Is there a correlation there?
Beat Kälin: In our business there are two key factors that influence the EBIT margin: volumes and the product mix. Both of these factors developed in our favor in 2022. Firstly, we were able to increase revenues significantly; secondly, the large number of orders for the build-up of substitute capacity outside of Ukraine had a positive impact on the product mix. The order book was above all dominated by crimp-to-crimp machines, which we produce in standard models with a correspondingly high operating leverage. But obviously it’s important to have your cost situation under control if you want to boost the EBIT margin.

How are shareholders benefiting from this rise in profitability?
Beat Kälin: Very directly. On the one hand, Komax shares appreciated by around 2% in 2022 despite a turbulent market environment – compare that to a 24% slump in the SPI Extra, for example. And on the other, through an increase in the dividend to CHF 5.50, as the Board of Directors is proposing to the Annual General Meeting. Half of this figure will be distributed from capital contribution reserves, which means it will be tax-free for natural persons domiciled in Switzerland who hold shares as part of their private assets. A dividend of CHF 5.50 equates to a payout ratio of 54.5%. We are therefore adhering to our strategic target of an attractive dividend policy with a payout ratio of 50–60% of Group earnings after taxes (EAT).

Will it be possible to make further distributions from capital contribution reserves going forward?
Beat Kälin: Yes, as the combination with Schleuniger has resulted in these reserves rising from CHF 0.8 million to CHF 207.1 million. Even after the proposed dividend is distributed following the AGM, we will still have CHF 180 million in capital contribution reserves. In other words, we will be able to pay numerous shareholders a partially tax-free dividend in the future, too.

Given that you achieved your existing financial targets a year earlier than planned, when will you be setting new targets?
Beat Kälin: In March 2020, the Board of Directors set a target of achieving revenues of between CHF 450 and 550 million in 2023, with EBIT of between CHF 50 and 80 million. And we achieved those targets in 2022, with revenues of CHF 522 million and EBIT of CHF 67 million. It goes without saying that these figures do not include the revenues and EBIT of Schleuniger, as the combination of the two companies was not factored into our calculations when we set the corresponding targets. We will define new targets as part of the strategy process that is currently unfolding, and will communicate these at the end of September.

But the combination with Schleuniger took place at the end of August 2022. Why will it take a whole year for you to define a new strategy and new targets?
Matijas Meyer: The Komax Group has become some 50% larger as a result of the combination. We have over 1 000 new employees and eleven new companies. If we want to be successful in the long term, it is crucial that employees are involved in the integration process and that we are transparent in our communications. Before we can formulate the new strategy we must first analyze the new status quo in detail. It's important that we deploy the great expertise of employees to best possible effect in all regions and market segments, both at Komax and at Schleuniger. For this to work, we first had to get to know each other and create a basis of trust on which we can build, so that we can forge a target vision for the future together. This process will take time, but I'm in no doubt at all that the investment will be worthwhile. Both Komax and Schleuniger are successful companies, so there's no need to rush through any urgent measures.

Aside from the new strategy, what areas are you focusing on in 2023?
Matijas Meyer: The integration process has gone very well so far, and many Komax and Schleuniger employees are already collaborating very closely. We need to continue along this path. At the same time, it's important that we don't get overly preoccupied with ourselves, but continue to respond to the needs of our customers in the best possible way. Numerous uncertainties will pose challenges in 2023 – such as wider macroeconomic developments, which will have an impact on the investment behavior of our customers, and the ongoing supply chain situation. That said, I'm looking ahead to the next few months with confidence, as the trend toward greater automation is intact and we intend to launch a number of new solutions. We will unveil some of these in November at Productronica in Munich, where Komax and Schleuniger will have a substantial shared presence at a trade fair for the first time. This will be a highlight of 2023.

"The combination with Schleuniger will strengthen our competitiveness over the long term."

Beat Kälin,
Chairman of the Board of Directors

MEGATRENDS ACCELERATE GROWTH

Global megatrends are accelerating key growth drivers for the business of the Komax Group. Environmental awareness, networked vehicles, and a desire for mobility solutions that offer greater safety and comfort yet remain affordable are fueling a steady rise in demand for automation solutions. They are leading to more wires and new types of wires in vehicles, which in turn is increasing the need for automated processes as a result of factors such as quality, efficiency, complexity, costs, miniaturization, and traceability.

The Komax Group generates the majority of its revenues in the automotive industry and is benefiting from the global, long-term megatrends in this industry. These include growing environmental awareness among consumers and the desire for greater safety and comfort in vehicles. On top of this, a global megatrend toward affordable vehicles is emerging. Despite the growing complexity of vehicles, individual mobility has to remain within the means of consumers if it is to be a feasible option for as many people as possible.

In the four market segments of the Komax Group, these trends are juxtaposed with a persistently low level of automation in the production of wire harness manufacturers. The lion's share of the wire harness manufacturing process is still done by hand. Against the backdrop of the aforementioned megatrends, manual production is coming up against increasing challenges that can be overcome by means of process automation. The megatrends are thus accelerating key drivers of growth for the Komax Group.

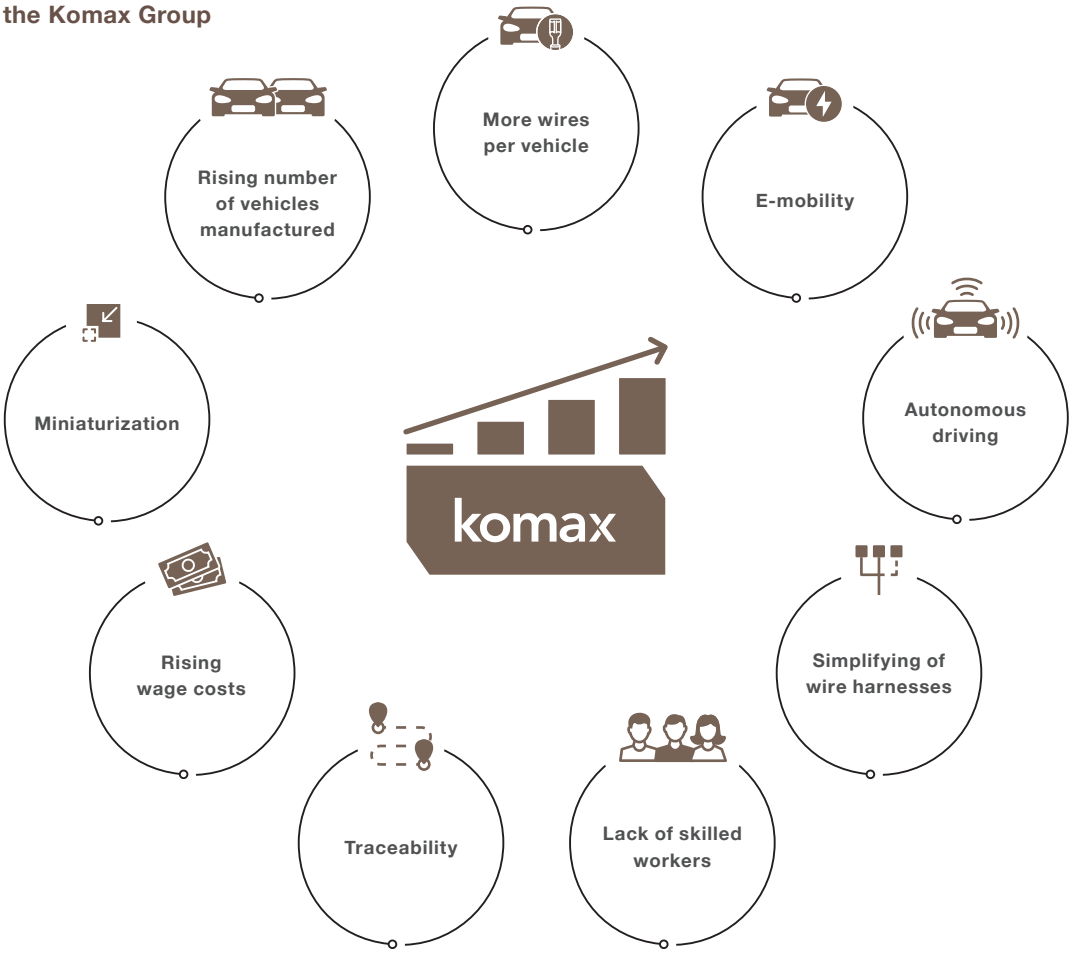
Rising number of vehicles being manufactured

After the slump of 2019/2020, global automotive manufacturing is back on a growth trajectory. According to IHS Markit analysis, some 82 million cars and light commercial vehicles were manufactured worldwide in 2022. Production volume was thus slightly higher than in 2021. Although the recovery was not as pronounced as expected at the start of 2022, the long-term growth trend is intact. IHS Markit is anticipating an average annual growth rate of around 3% over the next four years (for more on market developments, see page 36).

More wires per vehicle

Innovations in vehicle construction, new functionalities, and an ever-rising fit-out level in all

Key growth drivers of the Komax Group



vehicle classes are leading to a further increase in demand for wires and crimp contacts in the automotive industry. The need for greater safety in vehicles is driving up the number of electrical functions, for example. Here the emphasis is not only on protection in the event of an accident, but also – and above all – on avoiding accidents. As a consequence, the number of sensors in vehicles will continue to rise.

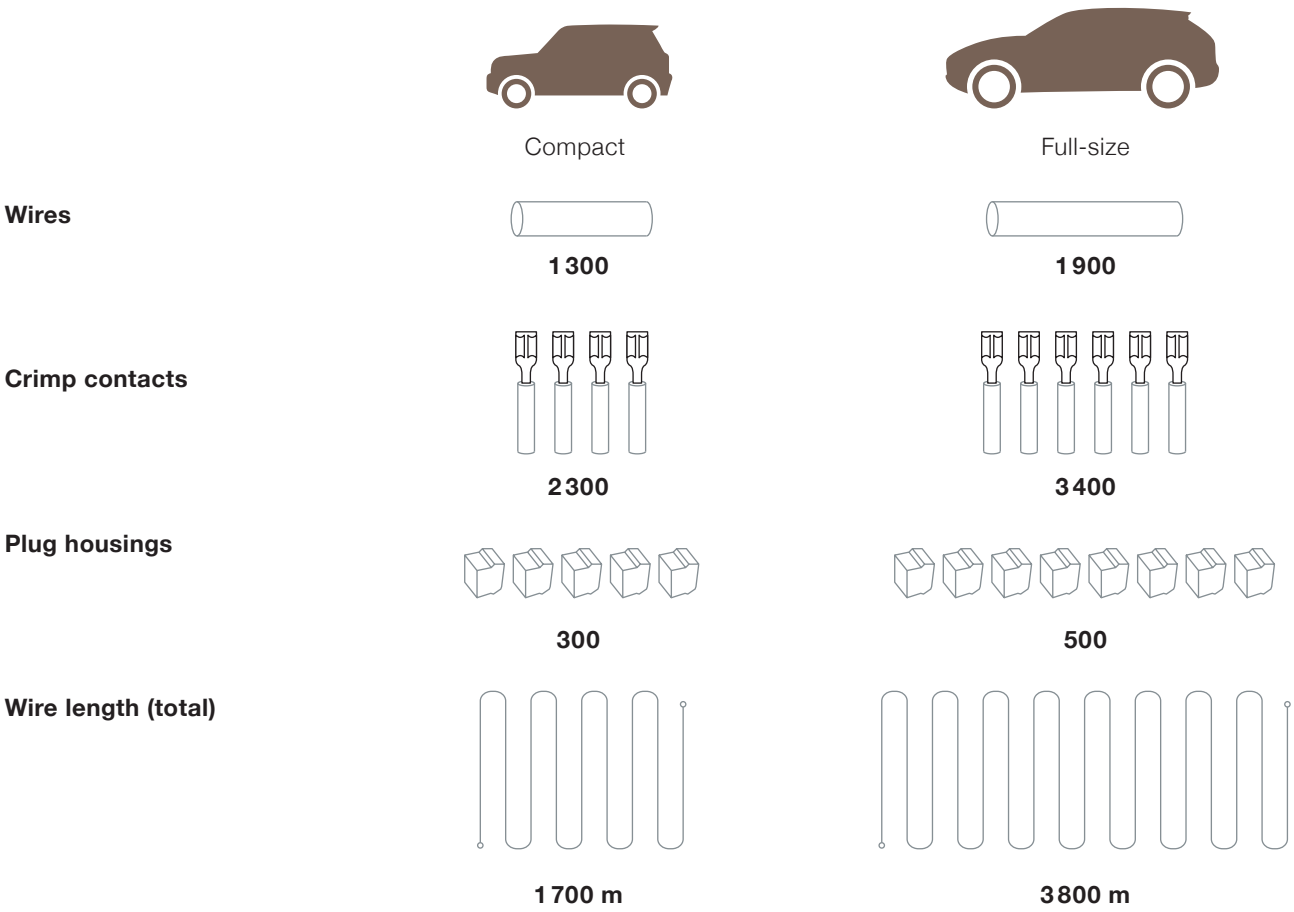
A further trend is growing interconnectedness. Infotainment systems in vehicles are becoming ever more wide-ranging and complex. Integrated information systems form the basis for the future: autonomous driving.

These trends, which have been in evidence for a number of years now, are set to intensify further. Accordingly, the number of wires being assembled per vehicle is on the rise. The electrical systems in today's compact passenger cars comprise as many as 1 300 wires, 2 300 crimp contacts, and 300 plug connectors. Premium vehicles require as many as 1 900 wires, 3 400 crimp contacts, and 500 plug connectors. This is several times as many as in vehicles built two decades ago. New technologies are generally rolled out first in the premium vehicle category, and then successively integrated into the other models, which in turn increases the number of wires there, too.

E-mobility calls for new wire processing solutions

Growing environmental awareness among consumers and the associated target of emission-free vehicles are part of the megatrends that will underpin the business of the Komax Group in the long term. In addition, the need for a more sustainable approach to the use of the Earth's resources is being increasingly boosted by regulatory measures. For example, from 2035 onwards, no new passenger cars with diesel or petrol engines will be registered in the EU (see page 38).

Increase in electrical functions in vehicles



In the most important market segment for the Komax Group – the automotive industry – the shift from combustion engine vehicles to e-mobility plays a key role. New types of high-voltage cables will have to be processed for these hybrid and electric vehicles (see page 57). This is an opportunity for the Komax Group to create further unique selling propositions and thus additional sales opportunities.

Miniaturization continues to make inroads
Another factor driving automation is the ongoing miniaturization of wires. Wire cross-sections are becoming ever smaller, which makes manual processing difficult or even impossible.

Simplifying wire harnesses through zonal architecture
The individual subsystems and assemblies in vehicles – and wire harnesses in particular – are becoming increasingly complex, which throws up challenges for automatic production. To counter this, various automotive manufacturers and suppliers are seeking to radically simplify the wire harness. The Komax Group is involved in such projects, and is demonstrating what changes are needed to wire harnesses in order to facilitate a greater degree of automation in the production process.

The goal is a zonal electrical system with several smaller wire harnesses rather than one big, complex one. The Komax Group is actively driving forward developments in this area together with partners, such as within the framework of ARENA2036 (see page 45). Wire length is reduced overall, but not necessarily the number of wires used, and this is the key element for the Komax Group. Simpler wire harnesses with shorter wires are easier to produce on an automated basis, and will help ramp up the degree of automation.

Cost efficiency in manufacturing

Efforts to simplify wire harnesses should also generate cost savings. Individual mobility has to remain affordable for consumers. This requires greater cost efficiency in manufacturing, which in turn is increasing the pressure to automate wire processing further – especially given the backdrop of rising wage costs and geopolitical uncertainty in low-wage countries where the bulk of manual wire processing is carried out.

Rising quality requirements

Modern vehicles contain ever more electrical components, particularly in connection with autonomous driving. This increases the quality requirements placed on wire processing. As components become increasingly complex, the potential sources of error in manual wire processing become more numerous. Manual processes are becoming less capable of meeting these demands. In addition, they are unable to ensure seamless traceability in the individual process steps to the same degree as automated solutions. This in turn makes after-the-fact troubleshooting more difficult.

The rapid proliferation of the zero-error tolerance principle means there is a growing need for test systems. Test systems of this kind guarantee the highest possible functionality of wire harnesses and electronic assemblies installed in vehicles. This is understandable, as defective wire harnesses require considerable time and expense – at the cost of productivity and profitability – to repair or replace once they have been fitted in a vehicle. Moreover, functional defects in the electronic systems of delivered vehicles can result in serious reputational damage.

Intelligent automation solutions, quality assurance tools, and systems for testing harnesses before they are installed in vehicles help guarantee the efficiency, safety, and consistently high quality of the production process. This has been recognized by automotive manufacturers, which is why they are increasingly calling on their suppliers to increase the degree of automation in their production processes.

Rising wage costs and a lack of skilled workers

The repercussions of the global events of recent years – whether it be the pandemic, difficulties in the international supply chains, or the war in Ukraine – are causing a shift in customers' thinking. They are looking for shorter supply chains, so as to strengthen security of supply. This will benefit automation, because if wire processing is relocated to countries with higher wage costs, headcount will have to be reduced in order to offset these additional costs. Added to this is the fact that there is already a shortage of skilled personnel. Yet another factor is that, over the long term, wage costs in what are currently low-wage countries should be expected to climb further. This, too, will boost investment in automation solutions.

Long-term trend toward automation

These key factors are driving the business of the Komax Group on a long-term basis. The coronavirus pandemic weighed heavily on the automotive industry, with the result that production figures for 2020 and 2021 were significantly down on previous years (see page 36). As a result, customers of the Komax Group had excess capacity for a prolonged period of time, and only resumed investment in capacity expansion as 2021 progressed. Despite this, the aforementioned factors that are fueling a higher degree of automation in wire processing made themselves felt. Discussions between the Komax Group and its customers on increasing the level of automation in a sustainable way have therefore continued uninterrupted over the last few challenging years.

Customers are aware that there is no way of side-stepping the trend toward automation. In the coming years, too, global megatrends will contribute to the stage-by-stage increase in the automation of wire processing.

BUSINESS MODEL AND STRATEGY

The Komax Group offers its customers cutting-edge technical solutions for automated wire processing in four market segments – automotive, aerospace, data/telecom, and industrial – and continuously strives to improve its competitiveness. Above-average profitability and sustainable growth are important objectives here. This goes hand in hand with environmentally conscious, socially aware, and responsible conduct toward all stakeholder groups. To achieve its objectives, the Komax Group pursues four key strategic priorities.

The Komax Group specializes in innovative solutions for all wire processing applications and for the testing of wire harnesses. The emphasis is on processes such as measuring, cutting, stripping, crimping, taping wires, and block loading. The Komax Group offers its customers fully automated and semi-automated serial production models as well as customer-specific systems (for all degrees of automation and individualization), which optimize processes while increasing productivity. These are supplemented by an extensive range of quality assurance modules, testing devices, and networking solutions for the reliable and efficient production of wire harnesses. Digital services that increase the availability of installed systems and test their productivity also form part of the range, as does intelligent software. All of this provides ideal conditions for customers of the Komax Group to consolidate and increase their competitive advantage.

FOUR KEY STRATEGIC PRIORITIES

The Komax Group has almost 50 years' experience in the development of customer-oriented solutions for wire processing and pursues a sustainable growth strategy that involves four key priorities:

Solutions along the value chain

Innovative production concepts

Global customer proximity

Development of non-automotive markets

8–9%
of revenues invested in research and development

Solutions along the value chain
Thanks to many decades of experience and its proximity to its customers (see pages 28/29), the Komax Group understands their needs and offers them a comprehensive range of innovative and reliable automation solutions. The offering covers the most capital-intensive and critical processes of customer value chains – from measuring and cutting wires to the taping process, and finally the testing of the completed wire harness (see pages 26/27). The Komax Group relies not only on its proprietary developments, but also on the expertise of established partners. As a result, customers receive solutions for the key wire processing applications on a one-stop basis. This approach is unique in the world.

In recent years, the Komax Group has succeeded in closing the existing gaps in its spectrum of products and solutions thanks to a number of acquisitions and the combination with Schleuniger, with the result that it can now offer its customers end-to-end solutions. The Komax Group has by far the broadest portfolio of solutions on the market, which means that it can address a whole range of customer needs in a targeted way.

Innovative production concepts
For a market leader like the Komax Group, innovations are of maximum strategic importance. The company has therefore been investing in innovations to optimize its existing product range, as well as in new developments, for many years. Every year, the Komax Group channels some 8–9% of revenues into research and development (see page 41). The bottom line here is to give customers an additional competitive edge by making their processes safer and more efficient. All activities are systematically geared toward customer needs and expectations.

That is why the Komax Group typically employs interdisciplinary teams – consisting of marketing experts, product managers, and development engineers – on innovation projects. For example, skillfully combining different processes and technologies reduces interfaces and lead times. At the same time, processing reliability is increased.

Global customer proximity
The Komax Group has 25 engineering and production sites located in Europe, Asia, North and South America, and Africa. The company provides sales and service support in more than 60 countries through its subsidiaries and indepen-

dent agents, which gives it a unique global presence. It has set itself the goal of being close to its customers so that it can provide outstanding service combined with the shortest possible response and supply times.

To remain competitive, customers of the Komax Group need to be flexible and select the optimal economic locations for their production processes – in other words, set up operations wherever their end customers are. This is also true for the Komax Group. To ensure that it stays close to its customers, including when those customers choose to relocate, the Komax Group likewise has to show flexibility. For this reason, the Komax Group seeks to expand its global reach in a targeted way, be it through acquisitions or by opening new sites.

75%
of revenues from customers in automotive

Development of non-automotive markets

The Komax Group generates around 75% of its revenues through customers in the automotive industry. Market estimates indicate that some 60% of globally processed wiring is used in automotive manufacturing. This high proportion is explained by the fact that the automotive industry is peerless when it comes to standardization and automation. The considerable volume of wires needed for large-batch processing and the stringent requirements in place with regard to finish quality are key arguments in favor of automated solutions.

In addition to the automotive industry, there are countless other markets in which numerous wires are processed. The Komax Group focuses predominantly on three additional market segments (see pages 34/35), all of which have synergy potential with the core business: aerospace, data communication and telecommunication (data/telecom), and industrial applications (industrial). As these markets offer attractive long-term growth opportunities, the Komax Group is seeking to increase its penetration. If this is to be achieved, targeted investment in marketing and sales is essential.

Financial stability

Safeguarding financial stability is a further key strategic element for the long-term success of the Komax Group. The company is distinguished by its robust equity base and strong profitability. Its equity ratio is 53.2%. This solid foundation enables the Komax Group to systematically pursue opportunities to develop the company further and offers security in challenging times.

Selective acquisitions

The Komax Group primarily aims to grow organically. In addition, potential candidates and opportunities for acquisitions are carefully examined as part of a clearly defined acquisition strategy that revolves around its four key strategic priorities. The acquisitions completed in recent years have played a significant role in the implementation of these strategic priorities. The combination with the Schleuniger Group in the year under review was an historic moment and has enabled significant progress with all four key priorities (see page 10).

MID-TERM TARGETS

The Komax Group has set itself ambitious targets for both growth and profitability by 2023. The Komax Group is seeking to increase the value of the company on an ongoing basis through profitable growth. Based on IHS Markit's analysis of developments in the automotive market, the Board of Directors set targets for revenues and EBIT for 2023 and confirmed the company's attractive distribution policy at the beginning of March 2020.

These targets do not yet include the additional contributions to revenues and EBIT from the combination with Schleuniger that was completed at the end of August 2022.

450–550	50–80	50–60
Revenues 2023 in CHF million	EBIT 2023 in CHF million	Payout ratio in % of EAT

The Komax Group is striving to achieve revenues of CHF 450–550 million by 2023, primarily on the basis of organic growth. The Komax Group estimates that the market will grow on average by at least 5–7% per year from 2020 to 2023. This growth is based on the annual increase in the number of vehicles produced globally (CAGR: 3–4%) and the steady rise in the degree of automation in wire processing (CAGR: 2–3%). The Komax Group is expecting to generate annual organic revenue growth at least in line with the growth of the market.

The Komax Group has a broad portfolio of innovative solutions. Rising revenue figures and an advantageous product mix enable the Komax Group to deliver disproportionately high increases in profitability. It is seeking to achieve EBIT of CHF 50–80 million in 2023. Thanks to a business strategy that is geared toward long-term success, the Komax Group creates sustainable value that benefits investors, too. The Komax Group has set itself the goal of distributing 50–60% of Group earnings after taxes (EAT) to its shareholders every year until 2023.

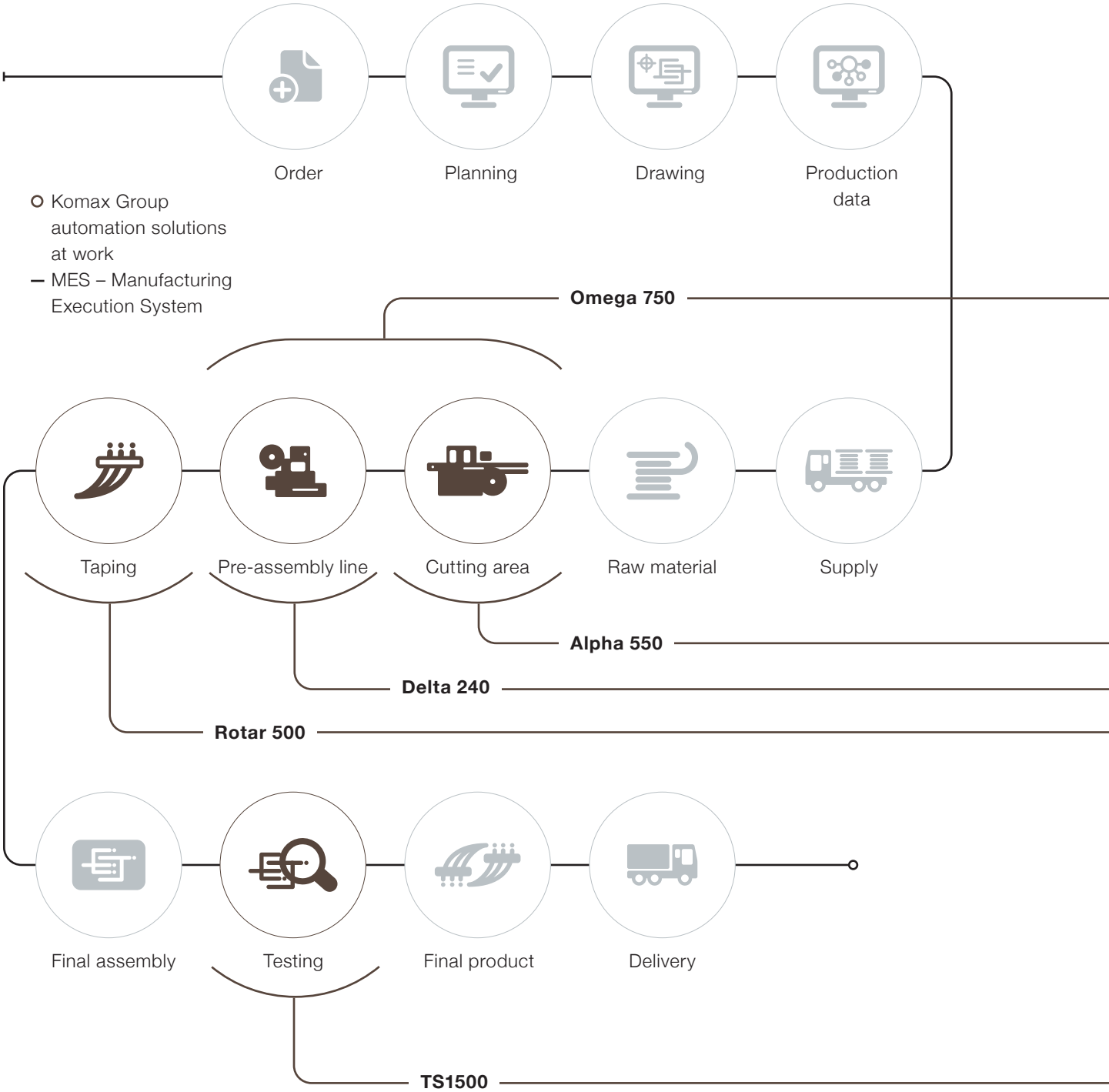
Due to developments in the global markets of the Komax Group and the great commitment of the employees, the company was able to achieve these three goals in the year under review.

Following the combination with Schleuniger, the Komax Group started to analyze the new situation in detail in order to subsequently draw up new targets and the related strategy. These are expected to be communicated at the end of September 2023 together with the new mid-term targets.

Komax Group key figures without Schleuniger

	2022	2021
Revenues (in CHF million)	522.2	421.1
EBIT (in CHF million)	66.7	44.8
Payout ratio (in % of EAT)	54.5	57.0

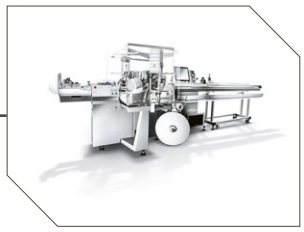
SOLUTIONS ALONG THE VALUE CHAIN



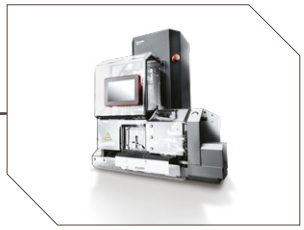
The majority of customers of the Komax Group are wire harness manufacturers whose business consists of processing individual wires – predominantly by hand – into wire harnesses and delivering these to vehicle manufacturers (OEMs). The Komax Group offers its customers a wide range of solutions and systems for the automated and efficient processing of wires and for the taping and testing of wire harnesses. These are used in the cutting room, at the pre-assembly stage, and when taping and testing.

In addition, the Komax Group supports its customers throughout the value chain – from planning through to delivery – with its Manufacturing Execution System (MES) solutions. This software automates the planning, controlling, monitoring, and analysis of all resources and production processes. This has the effect of optimally deploying machines, materials, and employees, so that wire harnesses can be completed to deadline, as well as to the requisite quality.

Cutting, stripping, crimping, block loading
With the Omega 750, the cutting, stripping, crimping, and loading of terminals is undertaken with just one machine. The end product is a wire harness fitted with contact housings on both sides, produced in a fully automated way.



Cutting, stripping, crimping
Fully automatic crimping (crimp to crimp) and twisting machines can be found in the cutting room. For the double-sided crimping and fitting of seals, customers use the fully automated Alpha 550 crimping machine (pictured) from Komax, or the CrimpCenter 64 SP from Schleuniger.



Semi-automatic crimping
In order to be able to process individual lines at the pre-assembly stage, customers use a machine like the Schleuniger StripCrimp 208 crimping machine or the Komax Delta 240 benchtop crimper (pictured). The programmable stripping unit, automatic fine adjustment of crimp height, integrated crimp force monitoring, and bad crimp cutter guarantee a high level of quality.

Taping
In order to reduce sources of noise and prevent electromagnetic disruptions, wire harnesses are taped with machinery such as with the new Rotar 500 (see page 48). The act of bundling wires or attaching fastenings to wire harnesses is likewise covered by this section of the value chain.

Testing
Before customers of the Komax Group deliver the completed wire harnesses to the OEM, they subject every single wire harness to a connection test (electrical test) using test systems such as the TS1500.

AROUND THE WORLD

North/South America

Revenues: **CHF 132.4m (21.8%)**
Employees: **454**
Engineering and production sites: **5**

Close to customers

25 engineering and production sites

The Komax Group produces in Europe, Asia, North and South America, and Africa, and provides sales and service support through its subsidiaries and independent agents.

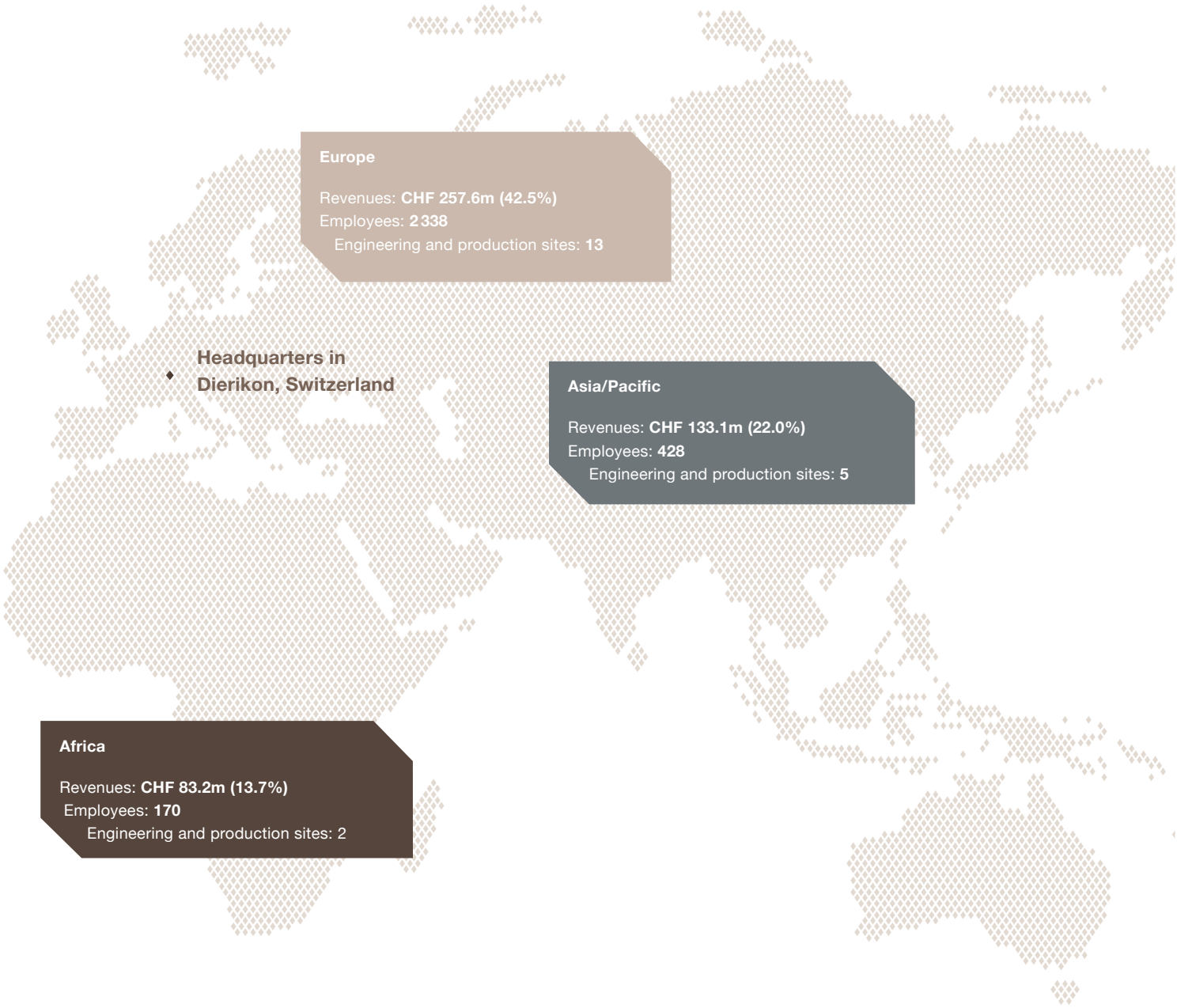
Strong multicultural team

3 390 employees

Unique distribution and service network

60

countries with sales and service support



Europe

Revenues: **CHF 257.6m (42.5%)**
Employees: **2 338**
Engineering and production sites: **13**

Asia/Pacific

Revenues: **CHF 133.1m (22.0%)**
Employees: **428**
Engineering and production sites: **5**

Africa

Revenues: **CHF 83.2m (13.7%)**
Employees: **170**
Engineering and production sites: 2

CUSTOMER PROXIMITY – GLOBAL LOCAL

Proximity to customers and short reaction and supply times are crucial to the success of the Komax Group. This is why it has been applying the motto "global local" for many years now – global production with a unique local distribution, engineering, and service network across all continents. With some 3 400 employees, the Komax Group produces standardized products and customer-specific systems at 25 locations worldwide.

The Komax Group has engineering and production sites across the continents of Europe, North and South America, Asia, and Africa at which it produces standardized products, customer-specific systems, and testing systems (see pages 28/29). Thanks to the combination with Schleuniger, the company has been able to significantly expand its market presence in Europe, North America, and Asia through eleven additional companies (see equity holdings on pages 133/134 of the Financial Report).

Furthermore, the Komax Group expanded its offering in India at the beginning of May 2022 with its own testing company in Pune, thereby strengthening customer proximity in the growing testing business in this important market.

With production sites in all the most important market regions of the world, the Komax Group meets the expectations of its global customers, who require their suppliers to have a local presence. In the current environment, characterized by persistent challenges in global supply chains, this customer proximity is proving an advantage. Potential supply difficulties can be mitigated in part by short distances. This is an area in which the Komax Group performed very well in 2022, despite the extremely challenging market situation.

Thanks to its customer proximity, the Komax Group has its finger on the pulse of industry. This is crucial for the Group if it is to deploy its experience of almost 50 years to develop high-quality, innovative automation solutions for local needs in global markets. In addition, international

"With our own production site in India we can explore the needs of our Indian customers even better and more rapidly, while at the same time positioning the Komax Group as a quality provider in this growth market."

Matijas Meyer, CEO Komax Group

“We would like our customers to be able to experience our products and services ‘live’, and are keen to shape the future of the industry together with them through intensive one-to-one exchanges of ideas.”

Tobias Rölz, Executive Vice President Market & Digital Services

orientation also helps mitigate the repercussions of currency fluctuations. The Komax Group seeks to ensure that costs and revenues are generated in the same currencies to the greatest extent possible.

With its unique sales and service network, the Komax Group can always provide efficient and competent support to its locally and globally active customers. It provides sales and service support via subsidiaries and independent agents in over 60 countries. Since the combination with Schleuniger, some 370 employees are working in the company’s international service organization.

Making products and services palpable for customers locally

The Komax Group enhances its customer proximity through its presence at trade fairs and events around the world. Here it presents its latest developments in automated wire processing and actively fosters exchange of ideas in respect of key themes in the industry.

The Komax Group hosted the WirePro Expo trade fair at its headquarters in Dierikon, Switzerland, on 25–27 October 2022. Some 2 400 experts from 44 countries attended the event to discuss the future of their industry. More than 100 products and solutions were presented by Komax, Schleuniger and six other exhibitors.

The focus of this event was on technical innovations along the entire value chain. The Komax Group unveiled numerous solutions, such as the new Omega 840/850 (see page 47), and emphasized its vision of the networked factory – the SMART FACTORY by KOMAX (see page 43). As part of the accompanying program, keynote speakers from Volkswagen AG, Siemens EDA GmbH, and EDAG Engineering GmbH, as well as numerous other experts, gave talks on trends and technical innovations in the industry. You can find more information on this event on

Interested visitors at WirePro Expo 2022 in Dierikon, Switzerland.

the News Portal of the Komax Group (newsportal.komaxgroup.com).

The trade fair highlight of 2023 will be Productronica, to be held in Munich in November. This will be the first trade fair at which Komax and Schleuniger have a large, shared exhibitor presence. Other trade fairs at which the Komax Group will exhibit can be found at www.komaxgroup.com/en/trade-fairs.

Digital customer proximity

Digital change is taking great strides forward in the B2B area. Customer needs and expectations have changed in all sorts of areas. Customers want to be able to call up product information, submit a service enquiry, or initiate an order rapidly, easily, and digitally. The Komax Group is helping customers here and supporting their digital needs.

This includes the company's recent launch of the Komax Unified Digital Experience – or Kudex for short. Through Kudex, the Komax Group is creating the technical and organizational prerequisites for achieving even greater customer proximity with its digital offerings, too.

The Kudex team focuses both on internal digitalization projects and those that can be directly experienced by customers. In order to optimally understand their needs and be in a position to offer added value through all channels, the Kudex team is currently working with a customer pool. Customers can register for this on a voluntary basis. In interviews and surveys they share their opinions, wishes, and experiences, which gives the Komax Group important information so that it can develop needs-oriented digital solutions.

An initial milestone was the launch of the new website (www.komaxgroup.com) in October 2022, with a modern design language, intuitive navigation, and revised content that has been optimized for all devices. As websites are regularly updated, on the face of it this sounds like just a small step for the Komax Group and its customers. But it is about much more than the website itself, which is just the first visible result of the work undertaken in recent years. In the future, the website will give customers access to a portal that will be continuously expanded over the coming years. Over the last few years, work has focused intensively on the cleansing and networking of systems and data in order to ensure a secure level of automation that is at the same time as efficient as possible. In 2023, this will (among other things) enable the Komax Group to introduce online service ticketing. Customers will be able to log in to their customer area via the website in order to address, among other things, maintenance orders or warranty cases. This is an initial step on the road to the self-service boutique of the SMART FACTORY by KOMAX (see page 43).

In order to make the new brand experience palpable for its subsidiaries, the Komax Group held a number of "We are one" roadshows at its various locations, such as here at TSK in Germany, which now goes by the name Komax Testing Germany.

New brand strategy

One of the key success factors of the Komax Group is its strong brand. Brand strategy is therefore a vital element in the implementation of the overall strategy of the Komax Group. Over the last few years, the Group has increasingly transformed into a provider of solutions and services along the entire value chain. As a result, the companies and products that lie behind the individual brands have converged more and more. This should also be reflected in terms of the visual image. To this end, the brands Artos, Exmore, Kabatec, Laselec, Thonauer, and TSK that existed prior to the combination with Schleuniger were relinquished, with the focus shifting to the Komax brand.

In addition, the Komax brand is being repositioned to add the notion of a partnership-based relationship to the aspects of pioneering spirit, technological leadership, and high-quality aspirations, and to make all these aspects more

tangible for customers. Similarly, the latest Annual Report has a new look, in keeping with the motto "Growing together."

As a result of the combination with Schleuniger, the Komax Group will adopt a multi-brand strategy over the coming years. In addition to the Schleuniger brand, the company has now also acquired the adaptronic, Cirris, and DilT brands. The positioning of the individual brands is set to be defined more sharply in alignment with the development of the Komax Group's new strategy.

Comprehensive service offering

The Komax Group has a broad-based service offering consisting of advice, installation, training, maintenance, repair and renewal, and the expansion of customer systems.

Building on this, the Komax Group has created an international service agreement concept in the form of Komax Care, which helps customers get the very best out of their machine investments in respect of productivity, availability, and quality. Komax Care allows individual service packages to be put together that are optimally tailored to the needs of customers. The underlying packages – Basic, Remote, Maintain, and Optimize – contain traditional technical services as well as innovative digital options, and can be expanded with various options that give customers of the Komax Group added value throughout the entire life cycle of their systems.

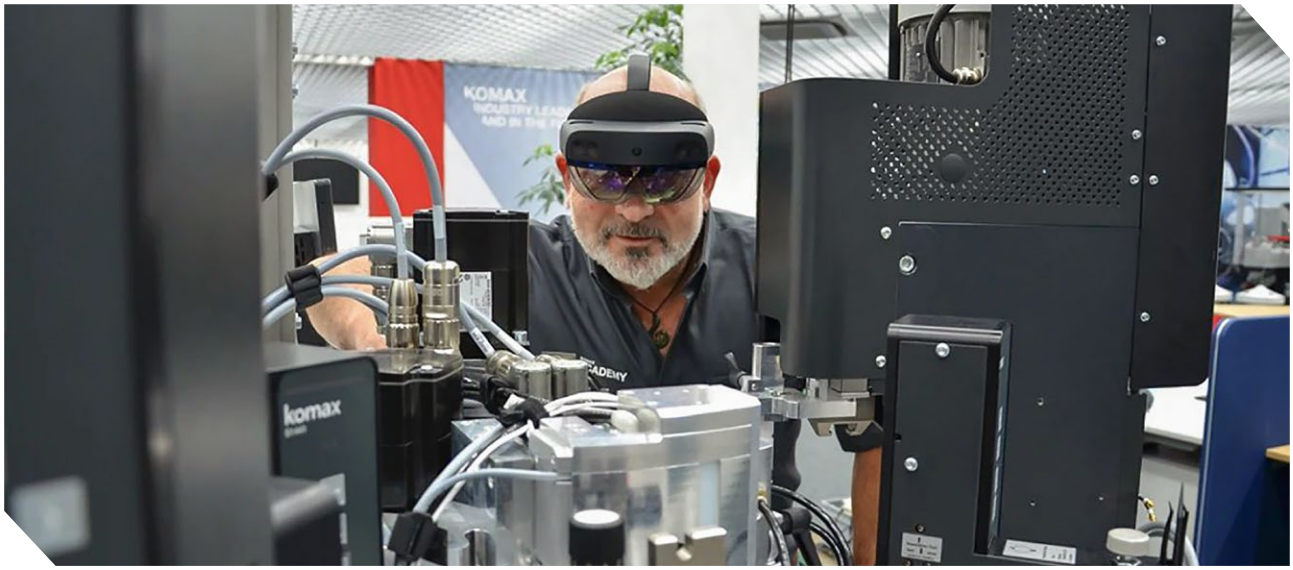
Training to boost customer productivity

A well-trained workforce can help minimize outages through user or maintenance error, and can shorten machinery configuration times. This translates into increased productivity as well as goods of higher and more consistent quality. Through the Komax Academy and the Schleuniger University, the Komax Group empowers its customers to operate and maintain their machines and testing systems flawlessly.

The Komax Academy provides a modular training program at three levels of competence – basic, advanced, and specialist – including certification. The various training modules are aligned with different customer needs and differing levels of experience, and take place at locations of the Komax Group worldwide. More than 100 training courses are also offered online in 13 languages.

This offering was further expanded in 2022 by the virtual classroom, for which the Komax Group developed an online environment. This sees course participants join a moderated group in an exhibition room or a production area via live streaming. With some applications, a holographic 3D environment is created for participants using "mixed reality" based on Microsoft's HoloLens2.

Among other things, the Komax Academy uses a holographic 3D environment with "mixed reality" for training purposes.



MARKETS

The Komax Group primarily focuses on four market segments. The core business is the automotive market segment, which accounts for some 75% of revenues. In the aerospace, data/telecom, and industrial market segments, the Komax Group is continuously strengthening its presence and exploiting the synergy potential with the core business. All segments benefit from the global service network of the Komax Group and from the various service offerings.

Automotive
The automotive segment is by far the most important market segment for the Komax Group. There are a number of reasons for this. In no other industry is the volume of wires to be processed so large. With a production output of more than 80 million vehicles per year, each containing on average some 1 600 wires with 2 600 crimp contacts, the demand for automation solutions is enormous. This is because the number of wires per vehicle is continually rising owing to an increase in electrical functions. Although the automotive industry has no peer when it comes to the degree of standardization and automation in the production process, there is still plenty of potential for additional automation steps, as wire harnesses are still manufactured by hand to a large extent.

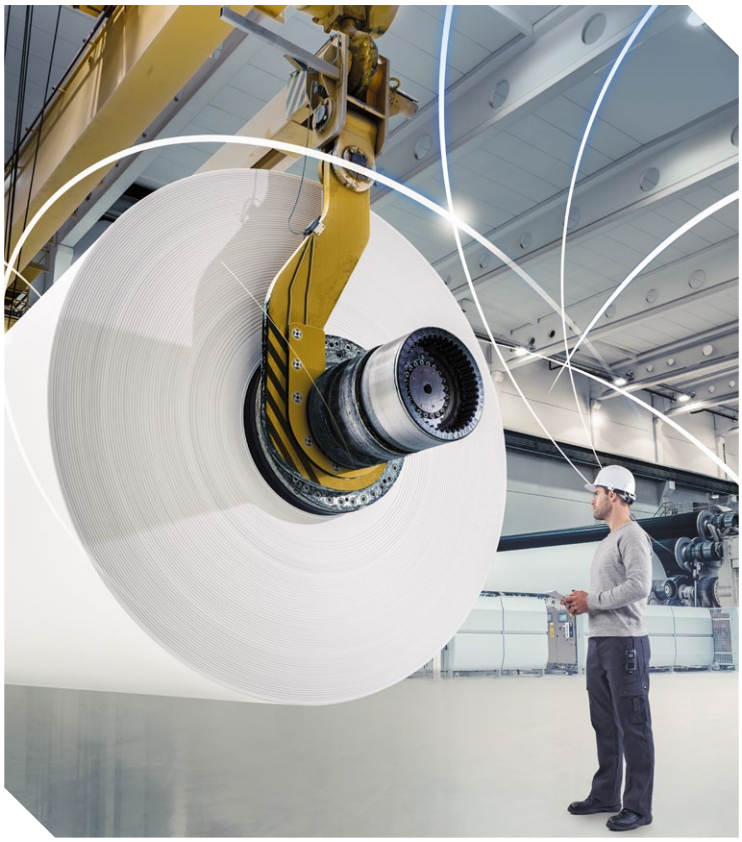
Data/telecom
The transfer of large volumes of data and the permanent networking of people have become standard practice in the data/telecom market segment. The wiring used in this area is being increasingly used in vehicles, too, as cars become ever more interconnected, with comprehensive information systems that are a prerequisite for autonomous driving. The Komax Group can therefore also transfer the experience gained in the data/telecom market segment to the automotive segment.

Aerospace

Issues such as safety, lightweight construction, and lower emissions have been at the forefront of developments in aerospace for many years. The Komax Group can draw on the experience acquired in these areas when it comes to its core business too, as these themes continue to gain in importance in the automotive industry. Thanks to Toulouse-based Komax Laselec, the Komax Group boasts a great deal of aerospace know-how. There is very little automation of wire processing in the aerospace industry, and the entry barriers for suppliers are considerable. As a result, it took years for the Komax Group to establish itself in this market segment and win major orders.

Industrial

The processing of wires for industrial applications such as electric control cabinets often involves working with very small batches. To ensure that automation is nevertheless a cost-efficient option for control cabinet manufacturers, Komax has developed specific machines of the Zeta type. These machines manufacture all the various wires that are needed automatically, ensuring that they are in the right sequence and of the right length. This has the effect of reducing manual labor to a minimum. Manual processes such as cutting, stripping, marking, and sleeve insertion are rendered obsolete. Automation of this kind has proven its worth in the area of wire processing in the automotive industry for many years, and is now increasingly finding its way into industrial applications. For the purpose of optimizing the available potential for automating control cabinet construction even more, the Komax Group works with technology leaders Armbruster Engineering, nVent Hoffman, Weidmüller, and Zuken in the Smart Cabinet Building Initiative (see page 45).



Automotive sector growing in a difficult environment

The largest sales market of the Komax Group recovered slightly from a low level in 2022. Despite the difficult market environment – which included persistent supply bottlenecks, war in Ukraine, and rising inflation – global vehicle production increased. The long-term trends of growing numbers of vehicles, e-mobility, and rising automation in wire processing business remained intact.

The rising number of vehicles produced is one of the growth drivers of the Komax Group. According to IHS Markit analysis, some 82 million cars and light commercial vehicles were manufactured worldwide in 2022. In other words, the volume of production was slightly above the level of 2021, which was more strongly affected by the coronavirus pandemic, but still well below the peak of 2017, when 95 million vehicles were produced. The reasons for this sluggish development are above all the persistently challenging situation in global supply chains, which has been exacerbated in Europe in particular by the war in Ukraine, high inflation, the interest rate trend reversal, and the gloomier overall prospects for the global economy. Growth forecasts for the next few years were gradually scaled down over the course of 2022 due to the expected economic slowdown.

IHS Markit is anticipating an average annual growth rate over the next four years of around 3%. At the start of 2022 they were still expecting a growth rate of between 4% and 5%.

Regional development reveals ongoing shift to Asia

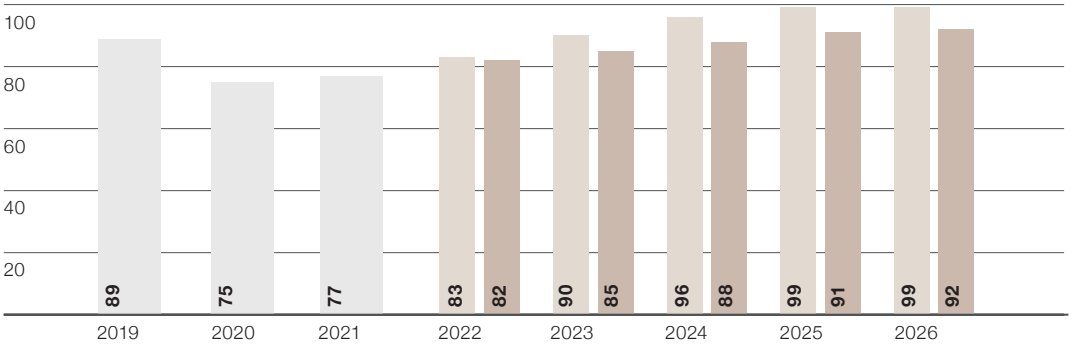
Compared with the previous year, the number of vehicles produced in 2022 developed differently in the various regions. In Europe, 15.6 million vehicles were manufactured, representing a slight decrease of 0.3 million vehicles, or 1.8%. The opposite trend was seen in Asia, where 46.8 million vehicles were produced, i. e., 3.2 million or 7.3% more than in 2021. In North/South America, production volumes recorded a sharp rise to 17.1 million vehicles, which equates to a growth rate of 9.5%.

China remains by far the world's biggest automotive producer. In the year under review, 26.3 million vehicles were manufactured in China, corresponding to over 32.2% of global vehicle production. A further 20.5 million vehicles were produced in other Asian countries, which means that some 57% of total vehicle production took place in Asia – one percentage point more than in 2021. Vehicle production has therefore been steadily shifting to Asia since 2019, when 52% of all cars and light commercial vehicles were manufactured there.

Analysts at IHS Markit expect production figures to rise in all regions in 2023, and Europe is predicted to make up further ground. With production volumes in Europe having declined for three years in succession, IHS Markit is now projecting an increase of 6.4%, or 1.0 million vehicles, in 2023. IHS Markit is also expecting growth in North/South America of 5.4% or 0.9 million vehicles. Analysts are predicting that the lowest increase will be recorded in Asia (+2.6%),

Number of passenger cars and light commercial vehicles produced

in millions



Forecast January 2022
Forecast January 2023

Source: IHS Markit

since the decline there in previous years was less significant than in other regions and production volumes had been ramped up again as early as 2021.

Semiconductor shortage and supply chain problems

The 2022 reporting year was characterized by various crises around the world. A shortage of semiconductors persisted in 2022, leaving the automotive industry exposed to ongoing supply bottlenecks. The result? New vehicles either could not be delivered at all, or buyers had to accept very long waiting periods. Moreover, in some cases buyers also had to forego key fitout accessories such as assistance systems. Although the availability of semiconductors has improved, the headwinds faced by the automotive industry can be expected to have a bearing on 2023, too.

Supply chain problems and an associated lack of component parts have been an issue for automotive producers for a few years now. The coronavirus pandemic weighed heavily on the network of global supply chains, and in some cases clear limits became apparent. This was due partly to congested ports, which in turn meant slower turnaround rates for ships, containers, and other means of transport, as well as longer transit times and mounting logistics costs. IHS Markit analysts are working on the premise that there is no quick fix for the supply chain problems and that this could lead to a change in supply chain management within the automotive industry. In other words, vehicle manufacturers will have to move away from sticking rigidly to just-in-time manufacturing and instead be able to build up stocks of various components. This option would prove less costly than further production stoppages.

Overcoming supply chain difficulties also represented a substantial challenge for the Komax Group in 2022, prompting supply hold-ups in some areas. Against a backdrop of rising production volumes and a concomitant increase in material requirements, the existing supply chain challenges became even more pronounced for the Komax Group. Overall, however, the Komax Group rose to these challenges very well, thanks to careful planning and professional supplier management. For the most part, the high delivery dependability that the company's customers are accustomed to was upheld.

Ukraine war exacerbates situation in automotive sector

The difficult situation in the automotive industry was intensified in the spring of 2022 by the war in Ukraine, as some 7% to 8% of all wire harnesses produced in Europe are assembled there. To compound matters, raw material and energy prices rose sharply, among other things due to sanctions against Russia on the part of the EU, the United States, and other countries. This resulted in additional cost pressures on both automotive producers and their suppliers. The situation was compounded by a general rise in prices, with rates of inflation at times surging to around the 10% mark even in the leading industrialized nations. This said, the International Monetary Fund (IMF) believes that inflation has already peaked and will continue to fall sharply over the next few years.

In order to compensate for reduced Ukrainian production capacity against a backdrop of war and secure their ability to supply automotive producers reliably, wire manufacturers have been building up substitute capacity in other countries, particularly in North Africa and elsewhere in Eastern Europe. As a result, the Komax Group received a large number of extraordinary orders in the first half of 2022.

Accelerated trend towards automation

The various geopolitical and macroeconomic factors influencing economic development have in no way changed the trend towards greater automation in wire processing. In the reporting year, this trend continued and even accelerated. The lion's share of wire processing continues to be done by hand, particularly in low-wage countries in Eastern Europe, Central America, and Asia. Geopolitical uncertainties, rising wage costs in the medium term, and an increasing shortage of skilled labor provide wire manufacturers with strong incentives to invest in automation. Furthermore, the emergence of a trend of shortening supply chains has become apparent.

As a consequence, automotive suppliers are moving closer to manufacturers. This is only possible by increasing the degree of automation, as wages in countries where automotive production takes place tend to be higher than those at the production sites of wire manufacturers. The Komax Group is observing this trend of shorter supply chains not just in the automotive industry, but also in the industrial market segment in the United States, for example.

Automotive industry undergoing radical change

The automotive industry has been going through a process of radical change for a number of years now. Alternative drivetrains, digitalization, and autonomous driving are playing a key role, which in turn necessitates very sizeable investments from automotive manufacturers. The modern driver has a number of alternatives to diesel and petrol engines – with electric, hybrid, plug-in hybrid, natural gas, and fuel cell vehicles. In particular, automotive groups have communicated ambitious multi-billion plans in the e-mobility sector, announcing a number of further new electric vehicles for the coming years.

This is in line with national plans to reduce greenhouse gas emissions, an essential step if the targets of initiatives such as the Paris Agreement on climate change and the European Green Deal launched by the EU Commission are to be achieved. In the reporting year, the EU tightened its CO_2 emission targets for new cars and light commercial vehicles. From 2035, CO_2 emissions for new passenger cars and light commercial vehicles will have to be reduced to zero. The mid-term emission reduction targets for 2030 were set at 55% for cars and 50% for light commercial vehicles. In 2022, California – the largest automotive market in the US – likewise issued a ban on the sale of new petrol cars from 2035, and other federal states are expected to follow suit. China has set itself the target of increasing the proportion of electric cars to 50% of all newly sold vehicles by 2035. In other words, the drive toward emission-free mobility is in full swing underway.

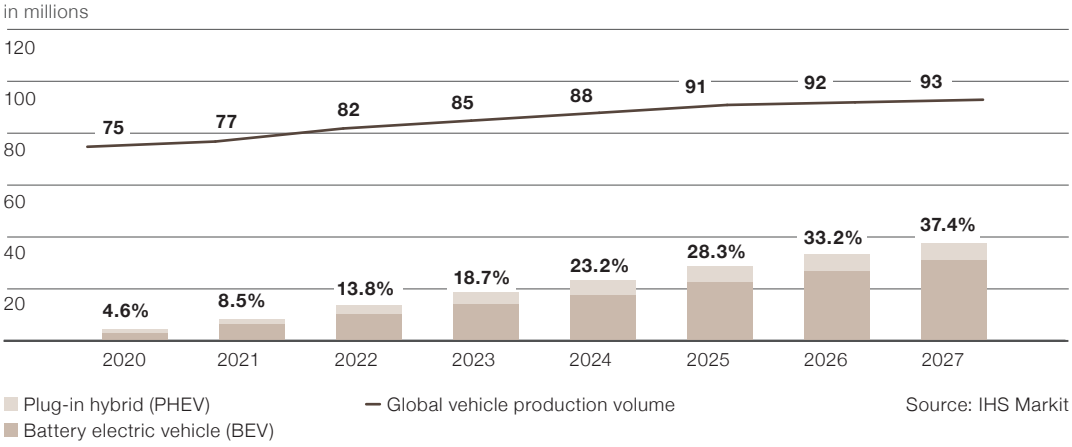
The Komax Group supports the transition to e-mobility

The coronavirus pandemic accelerated the trend towards e-mobility. Numerous automotive manufacturers have now named their cut-off point for production of the last vehicles with combustion engines. Volvo, for example, has announced that it will be selling exclusively electric cars as of 2030. Fiat will switch its product range to purely electric cars step by step between 2025 and 2030. And with effect from 2033, Volkswagen and Audi will likewise cease sales of vehicles with combustion engines in Europe.

Of the 82 million vehicles produced in 2022, 11.3 million were electric, i. e., pure battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs). China currently accounts for the lion's share of total production in this segment, or just under 60%. Compared with the prior year, in which 6.6 million electric vehicles (BEVs and PHEVs) were produced, the figure for 2022 represents an increase of around 71%. As a result, electric vehicles increased their share of overall automotive production from 8.5% to 13.8% in 2022. Given the impending bans on combustion engines and the plans of major automotive manufacturers, this development is set to continue over the coming years.

IHS Markit expects almost 16 million plug-in hybrid and electric vehicles to be produced in 2023, which would equate to just under 19% of global vehicle production. By 2027 this figure is set to rise to almost 35 million, or 37% of global vehicle production. This would equate to an annual average growth rate in electric vehicle production of more than 25% between 2022 and 2027. In the reporting year, IHS Markit sharply

Proportion of global vehicle production volume accounted for by electric vehicles



Source: IHS Markit

revised its estimates for development of electric vehicle volumes upwards. Compared with the previous year, its analysts increased their forecast for 2023 by 3 million electric vehicles and for 2027 by over 5 million electric vehicles.

The Komax Group is well positioned to accompany this transition. It will participate in growth on the one hand thanks to its portfolio of solutions for the processing of high-voltage cables, and on the other because new electric vehicle models frequently have state-of-the-art assistance and infotainment systems. All these systems require a large number of special cables, creating additional sales opportunities for the Komax Group.

Automation in non-automotive markets

In the reporting year, the trend towards greater automation was also observed by the Komax Group outside of the automotive industry. There is still a substantial need for automation in the industrial market segment in particular. This was already apparent in the difficult years following 2020, when this market segment experienced a drop in revenues that was much less pronounced than for customers in the automotive industry. Industrial customers such as control cabinet manufacturers, for instance, are seeking to enhance productivity through increased automation. One important factor here is the shortage of qualified personnel. Back in 2020, the Komax Group launched the Smart Cabinet Building Initiative together with other leading technology companies with a view to optimally harnessing automation potential in the area of control cabinet construction (more on this can be found on page 45).

In the year under review, the aerospace market segment increasingly recovered from the slumps suffered in 2020 and 2021. The key catalysts here were the end of coronavirus lockdowns and the increasing willingness of people to travel. The automation of wire processing is still not very advanced in this market segment, and this opens up opportunities for the Komax Group that it will put to good use.

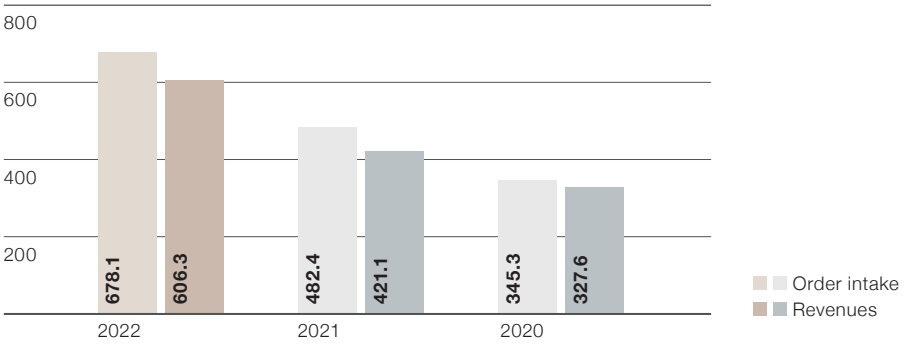
Sharp increase in both order intake and revenues

2022 was a very successful financial year for the Komax Group. It registered a record order intake of CHF 678.1 million, which is equivalent to a year-on-year rise of 40.6%. As at 31.12.2022, the company recorded a book-to-bill ratio of 1.12. Revenues were up CHF 185.2 million at CHF 606.3 million (+44.0%). Due to the supply chain situation, there were challenges in processing the very strong order book.

In the first half of the year, when the Komax Group received numerous orders as a result of the war in Ukraine, revenues could not keep pace with the development of the order intake. The Komax Group then improved the utilization of existing production capacity in the second half of the year thanks to the great efforts of many employees. In the last four months of the year following its consolidation, Schleuniger contributed CHF 84.1 million to overall revenues.

Approximately one third of the Komax Group's revenues hinges on the number of vehicles produced. Following the revenue slumps in 2019 and 2020, the Komax Group has gradually found its way back to normality since 2021. Overall, the upward trend that first manifested itself in

Order intake and revenues
in CHF million



that year persisted in 2022. Customers continued to seek to increase the degree of automation in their factories, demonstrating considerable interest in the innovative solutions of the Komax Group as a result.

Record revenue growth in all regions

The trend toward higher automation in all market segments, the war in Ukraine, and the combination with Schleuniger fueled a substantial increase in revenues in the reporting year in all regions. At +45.4%, North/South America recorded the strongest growth, followed by Europe (+51.2%), Africa (+37.4%), and Asia/Pacific (+34.3%).

The breakdown of revenues by currency changed minimally between 2021 and 2022: the proportion of revenues booked in EUR decreased slightly from 49.6% to 47.0%, but continues to dominate the revenue picture. The proportion of revenues booked in USD remained stable at 18.8% (2021:18.9%), while it decreased by one percentage point in CNY from 14.6% to 13.6%. Accordingly, the share of revenues booked in other currencies rose to 20.6%. The changes in the key currencies and their respective sensitivities are set out on page 129 of the Financial Report.

Outlook for 2023

The Komax Group started off 2023 with a record order backlog. The Komax Group is confident that the trend towards automation will persist, and hence so, too, the robust demand for the solutions offered by the company. In addition, the Komax Group is expecting the supply chain situation to gradually improve in 2023, which would help the high order backlog to be worked down over the coming months.

If Schleuniger had contributed twelve months to the Komax Group's 2022 results instead of four, revenues would have amounted to a total of around CHF 770 million. Despite the fact that the extraordinary revenues of approximately CHF 70 million triggered by the war in Ukraine will no longer be a feature of results in 2023, the Komax Group is anticipating revenues that are at least on a par with 2022 figures (around CHF 770 million). This is assuming that there are no significant changes in the market environment and in knowing that visibility is limited to a few months. The EBIT margin depends very much on the product mix. Given that this is unlikely to be as favorable in 2023 as it was in 2022, the Komax Group is expecting an EBIT margin in the region of 11%.

Revenues by region

in TCHF	2022	2021	+/– in %
Europe	257 641	170 377	51.2
Asia/Pacific	133 157	99 132	34.3
North/South America	132 364	91 032	45.4
Africa	83 170	60 526	37.4
Total	**606 332**	**421 067**	**44.0**

A percentage breakdown of revenues by region can be found on pages 28/29.

STRENGTHENING INNOVATION

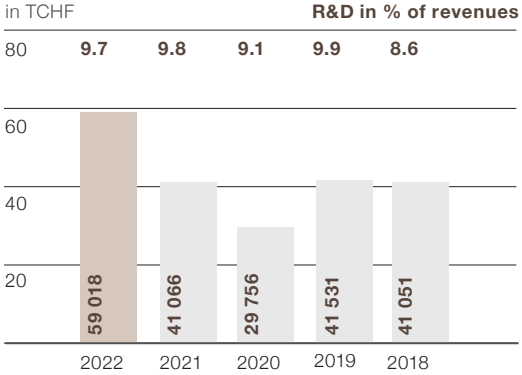
For a market leader like the Komax Group, the ability to roll out innovations on an ongoing basis and thereby enable its customers to gain genuine competitive advantages is of the utmost strategic importance. For that reason, the Komax Group channels some 8–9% of its revenues into research and development every year. The combination with Schleuniger is now opening up further avenues of opportunity.

9.7%
of 2022 revenues invested in research and development

Megatrends such as electro-mobility, digitalization, and autonomous driving offer many opportunities in the market of automatic wire processing. In order to exploit these and be in a position to offer customers further innovative solutions, the Komax Group has for many years been investing above-average sums in new developments and the optimization of its existing product portfolio. Specifically, the Komax Group has spent CHF 212.4 million in this area since 2018. In doing so, it has consolidated its leading position, driven forward the automation of wire processing, and actively influenced the process of radical change in the automotive industry. These are crucial upstream investments that will allow the Komax Group to leverage additional unique selling propositions and secure the company's competitiveness. The goal is to develop additional innovative and differentiating products and solutions for customers.

In 2022, the Komax Group, including Schleuniger, invested a total of CHF 59.0 million or 9.7% of revenues (2021: 9.8%) in the development of new products and the optimization of existing ones. This amount comprises both investment in internal development services (CHF 49.5 million) and in those of third parties (CHF 9.5 million).

Expenditure on R&D[1]



[1] The Schleuniger Group was consolidated as of 1 September 2022. Accordingly, four months of Schleuniger's R&D expenditure are included in the financial year 2022.

Bundling of innovative strength thanks to the combination with Schleuniger

A key strategic target of the combination of Komax and Schleuniger at the end of August 2022 is to bundle the companies' skills and resources in the area of research and development. Market opportunities can be better exploited jointly. Customers can be more rapidly provided with innovative solutions for their needs, and can further increase automation.

The Schleuniger Group is likewise a technological leader in the automation of wire processing, and regularly brings new products with unique selling points to the market. In particular, Schleuniger has brought market-leading expertise in automatic benchtop cutting and stripping equipment, as well as in the high-voltage area to the Komax Group.

As part of the integration of the Schleuniger Group into the Komax Group, all development projects are being scrutinized. The analysis focuses on where there is overlap and how the different skills of both companies can be optimally exploited. Here it is important to ensure that the progress already made on ongoing projects is not lost but merged. This integration process will have the effect of strengthening the company's power of innovation and freeing up new capacity. This in turn will mean that future development projects that the Komax Group has previously had to defer can be realized more quickly. The Komax Group will thereby secure its competitiveness for the long term and be in a position to continue to offer its customers cutting-edge technological products and solutions.

713
employees in R&D and engineering

271 additional employees in research and development, and engineering

As of 31 December 2022, the Komax Group had a workforce of 360 employees (2021: 222 employees) in research and development. The strong year-on-year headcount increase of 62% is the result of the combination with Schleuniger. The majority of these (224 employees) continue to work in Switzerland, which is why the majority of R&D expenditure is incurred there. In addition, the Komax Group maintains development units in Belgium, China, Germany, France, Japan, Singapore, Hungary, and the US.

The power of innovation of the Komax Group is strengthened by no less than 353 engineers (2021: 220 engineers), who make an important contribution through the development of customer-specific applications. The personnel costs of these engineering employees are not included in research and development expenses where these individuals have worked directly on customer projects.

SMART FACTORY by KOMAX

The trend towards digitalization is in full swing, particularly in the automotive industry. More digitalization also means more data, more electrification, and more wiring and cabling. This is good for the business of the Komax Group, but presents its customers with growing challenges. A wide range of components and products are becoming increasingly intelligent and, at the same time, more complex on the electronic side. The miniaturization of contact systems is continuing, adding a further layer of complication to manual production steps. Compounding this problem are ever-rising personnel costs along with a global shortage of skilled labor.

Customers of the Komax Group have to deliver consistently high quality and reliability despite rising complexity and higher personnel expenses, while the same time keeping costs as low as possible. The Komax Group helps them to meet these growing challenges. Specifically, the Komax Group has developed a vision for how wire manufacturing can be optimized in the future – the SMART FACTORY by KOMAX. It features five components.

"Through the combination with Schleuniger, the Komax Group has gained additional expertise and more resources to support its customers with innovative products and services as the degree of automation continues to rise."

Matijas Meyer, CEO Komax Group

THE FIVE COMPONENTS OF THE SMART FACTORY BY KOMAX – OUR VISION OF WIRE MANUFACTURING IN THE FUTURE

Real-Time Quality Audits

The Komax Group enables real-time quality audits. Quality data is collected using IoT technology, stored in the cloud, and processed in a user-friendly manner. This means that customers can produce quality reports immediately and easily, and thereby demonstrate compliance with quality requirements at at any time and trace processes.

No Operator Influence

The Komax Group develops fully-automatic, networked solutions in order to minimize operator influence. For customers this means a reduction in both personnel costs and dependency on labor. Moreover, productivity and transparency are improved while quality remains consistently high.

On-Demand Service

The Komax Group offers solutions and services on demand. These include performance- or usage-based payment for systems, financing and leasing services, and procurement of production capacities to handle production peaks, for example. This enables customers to reduce their capital requirement and increase flexibility, stability, and responsiveness.

Self-Optimizing Factory

The self-optimizing factory improves productivity while also reducing quality costs. To achieve this, the Komax Group provides cloud-based algorithms based on production and behavioral data. Customers therefore significantly improve machine utilization while at the same time reducing their quality costs.

Self-Service Boutique

The Komax Group offers access to a digital self-service boutique. Customers benefit from services such as product and spare parts ordering, web-based training, software downloads and upgrades, license management, plus analysis and optimization tools. This means they can access the services of the Komax Group at any time, from anywhere, and get a customized picture of their business.

You can find more information on the SMART FACTORY by KOMAX in this video:
komaxgroup.com/en/expertise/smart-factory

In all these areas, the Komax Group is working continuously on implementing its vision, and has already taken the first steps:

In order to minimize the influence of the operator in wire processing, the Komax Group has developed the Alpha 650 crimp-to-crimp machine with its intelligent, fully automatic tool changeover system. This executes the material change in less than a minute – rather than the standard 15 minutes by hand – while at the same time selecting all the key settings autonomously. This prevents incorrect handling and guarantees the ultimate in precision and process quality.

Comprehensive production data from machinery makes a key contribution to improving productivity and quality in wire processing. This becomes apparent with Komax Connect, a cloud-based digital platform that processes and visualizes this data. Customers receive all the information they need for the targeted productivity optimization of every machine in real time. For example, machine downtimes can be immediately analyzed and the parameters recognized for the ideal ratio of quantity to quality.

With the launch of its new website (www.komaxgroup.com) in October 2022, the Komax Group laid the basis for its 24/7 online service in the form of an e-shop platform. This platform enables the Komax Group to effect flexible, ongoing optimizations. This includes – as a further step – online service ticketing for customers.

The Komax Group offers its customers flexibility on the financing side. This encompasses payment for machines based on performance or usage (e. g., pay-per-use), as well as financing and leasing services. Among others, the Komax Group cooperates with Siemens Financial Services in this area. With Komax Care, customers receive individually tailored service packages that enable them to maintain machine quality and productivity over the longer term.

The Komax Group offers comprehensive quality solutions along the value creation chain – from the cutting area through to the testing stage. A good example of this is the Q1250 quality tool – the "digital eye." With its intelligent image analysis, the Q1250 module monitors crimp quality wholly automatically, thereby eliminating the need for laborious visual checks by the machine operator. The broad spectrum of quality solutions and the multitude of data that these generate form the basis for implementing the real-time Quality Audits Vision.

As a driver of innovation and market leader in automated wire processing, the Komax Group is implementing its vision of the SMART FACTORY by KOMAX on an ongoing basis. In doing so, the company is raising the quality, productivity, and flexibility of wire processing to a new level. Together with its customers, the Komax Group works intensively on making life simpler, more convenient, and safer.

Breaking new ground for wire harness production

The wire harness is currently one of the most laborious, complex, and expensive individual components in any vehicle, and is therefore of crucial importance to the entire automotive industry. The move to e-mobility and autonomous driving is changing the requirements for the design and manufacture of the wire harness. For automotive groups this means significant investment. Their suppliers must develop solutions for new customer needs. The direction of this process has been clear for several years now.

As a specialist in automated wire processing, the Komax Group proactively shapes these developments, and joins forces with leading companies from the automotive industry in a number of organizations. ARENA2036 is an example of this (www.arena2036.de). Here, interdisciplinary teams are busy researching the automotive production processes of the future. The Komax Group is working on several projects as part of this collaborative effort. Among other things, this includes the development of guidelines on how automotive manufacturers should design wire harnesses so that they can be assembled reliably thanks to a high degree of automation.

Both Komax and Schleuniger cooperate in this context with leading automotive manufacturers and suppliers such as Aptiv, BMW, Bosch, Daimler, Dräxlmaier, Kromberg & Schubert, Kuka, Nexans, Rosenberger, Siemens, TE Connectivity, and Yazaki. One of the first results of this initiative was the development of a DIN standard in 2022 to address the rise in complexity and facilitate inherently consistent standardization.

In keeping with the zonal approaches that apply in wire harness architecture, the wire harnesses of the future need to be designed in a modular way, with the smallest possible component diversity. Several compact wire harnesses with shorter wires are less complex, more cost-efficient to produce, and above all more conducive to automation than one large wire bundle. And this is what the Komax Group is committed to.

Digitalization with Industry 4.0 and the Industrial Ethernet of Things (IIoT)

In order to drive forward digitalization, the Komax Group collaborates with various leading companies in a range of organizations. These include the Open Industry 4.0 Alliance, which is developing a framework based on existing norms, standards, and protocols (e. g. OPC UA, IO-Link, RAMI 4.0), so that machines can communicate with one another in a uniform language. Thanks to this development, potential solutions for optimum networking at customers' premises – such as with digital interfaces and remote monitoring – can be incorporated in the development of new solutions of the Komax Group. This is particularly important for the SMART FACTORY by KOMAX. The Open Industry 4.0 Alliance now has more than 100 members, including companies such as Beckhoff, Endress+Hauser, Kuka, Microsoft, Samson, and SAP.

Single Pair Ethernet (SPE) – the infrastructure basis that facilitates the IIoT (Industrial Ethernet of Things) and Industry 4.0 – is important for the process of data transfer in vehicles. The Komax Group joined two SPE associations at the start of 2022. The SPE Industrial Partner Network is a network of companies whose aim is to promote this technology as the basis for rapid and successful growth of the IIoT. Its members include companies such as Hirose Electric, Hirschmann, Leoni, Nexans, and TE Connectivity. In addition, the Single Pair Ethernet System Alliance sees companies such as dormakaba, Phoenix Contact, Rosenberger, Shenzhen Signal Electronics, and Weidmüller joining forces to establish SPE solutions in as many markets and applications as possible, while at same time creating a uniform market standard. The Komax Group cultivates regular exchange of ideas, and benefits from the transfer of expertise between the partners.

Smart Cabinet Building Initiative – comprehensive solutions for control cabinet construction

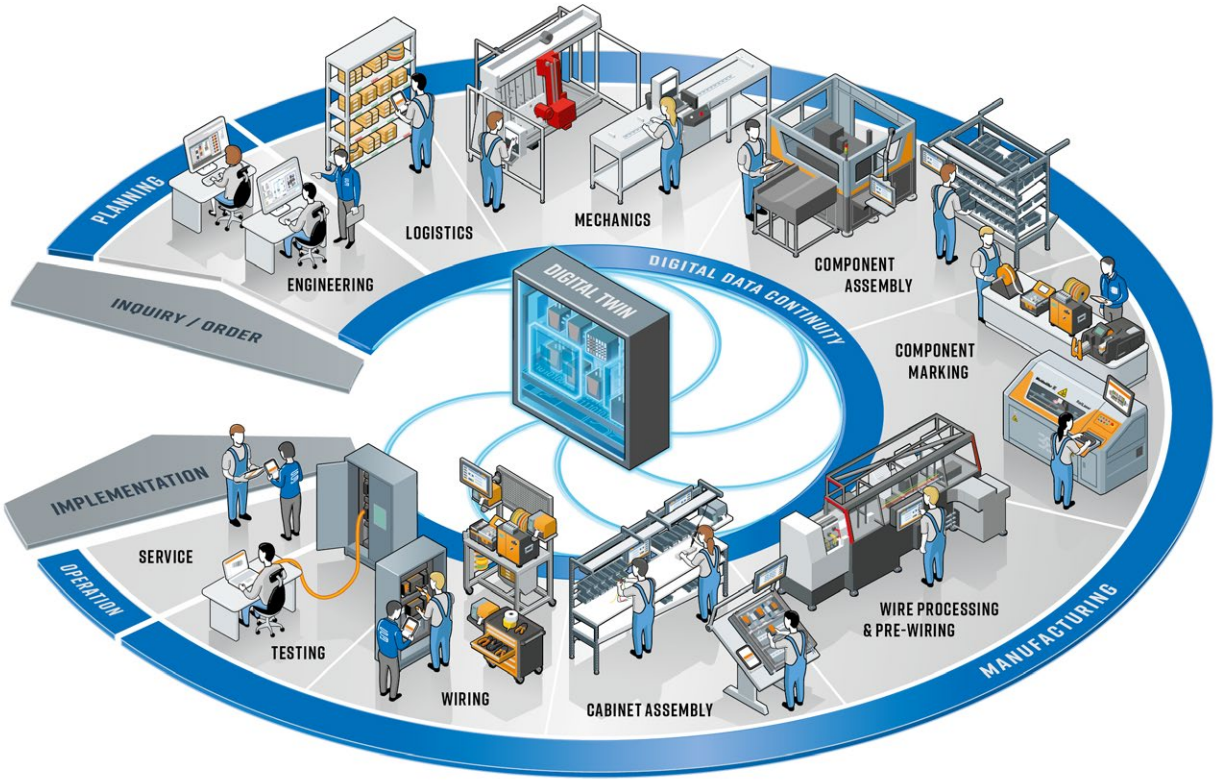
In the industrial market segment, the Komax Group is active in the control cabinet construction area, among others. Up until now, control cabinets have typically been constructed manually and step by step, as one-off constructions. But there is a great deal of automation potential in this area. To be able to tap into this potential to maximum effect, the Komax Group and three other leading technology companies – Armbruster Engineering, Weidmüller, and Zuken – launched the Smart Cabinet Building Initiative in 2020. They were then joined by nVent Hoffman in 2021 (www.smart-cabinet-building.com).

The aim of this initiative is to use the networking of technology and expertise across all process steps to deliver comprehensive solutions for control cabinet construction. This would enable working stages that have so far taken place chronologically to be executed in parallel, thereby saving both time and costs. The five partners cover the complete spectrum – from engineering, including the creation of a "digital twin", through to component selection, the pre-assembly of wire harnesses, operating resources and housings, and assisted final assembly.

In order for the individual process steps to be interconnected, a full digital description of the control cabinet and its components is crucial. This involves the creation of a digital twin, which is used to control the various process steps and permits the efficient parallelization of work on the control cabinet, while at the same time making it possible to exploit the full optimization potential. The systematic collaboration that characterizes the Smart Cabinet Building Initiative allows the digital twin to be deployed to maximum effect. The Komax Group and its partners will be further increasing automation and therefore efficiency levels in the control cabinet construction area going forward. This will enable customers to remain productive despite the shortage of skilled labor.

In 2022, the partners jointly presented the progress made at the Hanover Fair in Germany and at WirePro Expo in Dierikon, Switzerland. Customers were impressed by the thoroughness of the concept.

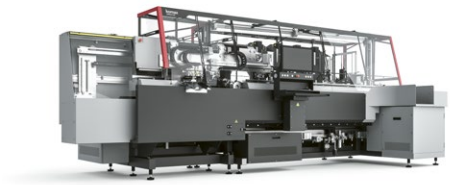
THE AREAS OF EXPERTISE OF THE FIVE PARTNERS COMPLEMENT EACH OTHER TO PERFECT EFFECT, AND COVER ALL THE PROCESS STEPS IN CONTROL CABINET CONSTRUCTION.



EXAMPLES OF CURRENT INNOVATIONS

Thanks to its targeted investment in research and development, the Komax Group succeeds in bringing a variety of new products, product enhancements, and services to market every year. The Komax Group demonstrated its technology leadership impressively in 2022.

Zeta 620 for control cabinet construction
With the Zeta 620, a fully automatic wire processing machine, Komax launched a product in 2022 that makes it easier for cabinet constructors to get started with the automation of wire processing, and is therefore very much in harmony with the Smart Cabinet Building Initiative. In the smallest of spaces, this wire processing machine produces complete parts lists, and sorts and labels the wires so that they then only need to be laid in the control cabinet. Without any change being required, it can process up to 24 wire types in any order with a cross-section of between 0.5 and 6.0 mm², with up to seven different ferrules. The available module options simplify the production process and deliver clear savings in terms of both time and costs. With the Zeta 620, even smaller control cabinet constructors can make the transition to automation cost-effectively.



Omega 840/850 – first automatic insertion machine for twisted-pair wires
Twisted-pair wires are a major challenge for automatic wire assembly, as two ends must be aligned at a small distance apart from one another and then inserted into the connector housing. As things stand, the great majority of partial wire harnesses in vehicles are fitted with these twisted wires, and this proportion is on the rise. They now account for up to 40% of the entire wire harness, as an increasing number of sensors and actuators need to be incorporated that rely on these wires. This increases the amount of manual production work, while at the same time increasing susceptibility to operator error. With the new Omega 840/850, wire harnesses can for the first time be assembled fully automatically with almost any combination of single and twisted wires. Customers therefore bring down their costs, increase product quality, and reduce the amount of testing and correction work that would be required with manual assembly.

Lambda X – greater flexibility and lower space requirement
In October 2022, Komax unveiled its new Lambda X generation of transfer lines. This machine is a modular platform for the semi-and fully-automatic wire processing of data lines. Wires can be fitted on either one or both sides. The modular set-up of hardware and machine control is conducive to efficient and intuitive operation. Single production modules can be individually added by the customer, which in turn facilitates great flexibility. The Lambda X is therefore only as large as the customer requires. This allows for a space saving of up to 45% compared to the predecessor generation as well as competitor products. What's more, the Lambda X can be expanded after its initial commissioning at the customer's factory, and the degree of automation can be further increased.

Schleuniger Transfer Line Family S70

Schleuniger has unveiled a number of innovative transfer machines in recent years. Indeed, with its Transfer Line Family S50 it has simultaneously won two prestigious design prizes: the iF Design Award in the "Industry/Tools" category, and the German Design Award in the "Excellent Product Design – Industry" category. The Transfer Line Family S70, a modular platform for high-voltage applications, likewise scooped a number of awards in 2022, including the most significant technology prize in Switzerland – the Swiss Technology Award in the "Industry Innovation" category.

New Rotar 500 taping machine for highly complex wire harnesses
With the new Rotar 500 series, wire harnesses can be efficiently processed for vehicle doors, mirrors, or batteries. The process of taping – i. e., the administering of adhesive tape – protects and orders the individual wire bundles and reduces the noise emissions of loose wires. The program controlling of the Rotar 500 guarantees reproducible quality. Thanks to the new design, the handling time can be reduced significantly compared to competitor products. What's more, automated taping using the Rotar 500 series reduces the consumption of adhesive tape by up to 25% compared to manual taping. The installation is compatible with MES (Manufacturing Execution System), and can therefore be seamlessly integrated into the value chain of automatic wire processing.

Strip Series B300 – new benchtop stripping machine
In 2022, the Schleuniger Group launched its Strip Series B300 – a new class of portable, programmable benchtop stripping machines. When developing this machine, which weighs in at just 11 kg, the focus was on ergonomic superiority and simplicity of use, as these aspects have clear repercussions for productivity. The front cover is slanted at an ergonomic angle and ensures a good line of sight for feeding in the wire. A clear, high-resolution, five-inch color touchscreen is combined with guided menu navigation for immediate, intuitive handling. The B300 is therefore easy to operate even without programming knowledge, and permits the rapid and reliable stripping of wires with cross-sections of 0.03–8.0 mm^2.

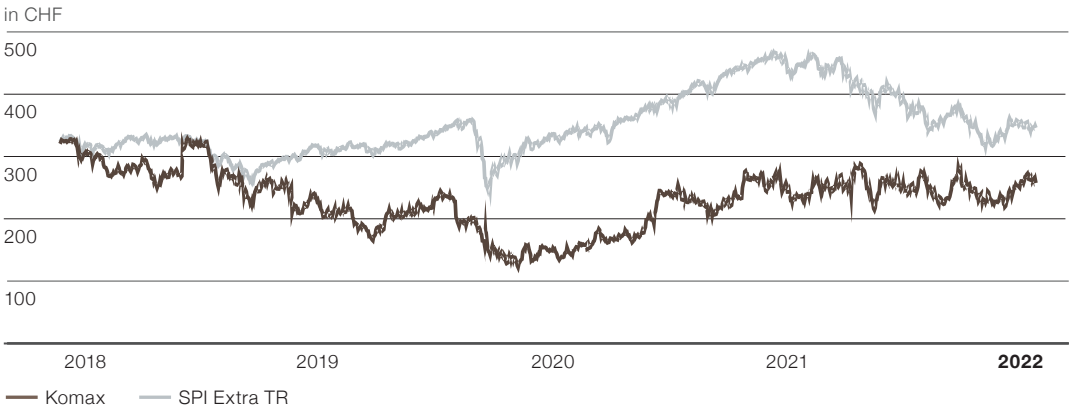
The Komax Group is continuously driving forward innovations. At the WirePro Expo trade fair in October 2022, which was held at the company's headquarters in Switzerland, a specialist audience was shown numerous new developments. Customers of the Komax Group will be able to benefit from a range of further new products this year and in the coming years.

SHARE INFORMATION

The Komax Group cultivates a policy of open and transparent communication with its investors. It allows shareholders to participate in the company's success through its attractive and sustainable dividend policy (payout ratio 50–60%).

Over the course of 2022, the daily closing price of the Komax share ranged between CHF 214.00 and CHF 288.00. The year-end closing price was CHF 257.50, slightly above the previous year's level (2021 year-end closing price CHF 253.00). In a turbulent stock market environment, the SPI Extra declined by a clear 24% over the same period. The SPI Extra performed better than the Komax share on a five-year comparison. While the SPI Extra increased by 8.3% from the end of 2017 to the end of 2022, the Komax share lost 19.4% in value over the same period.

Share price development (31 December 2017 – 31 December 2022)



LISTING

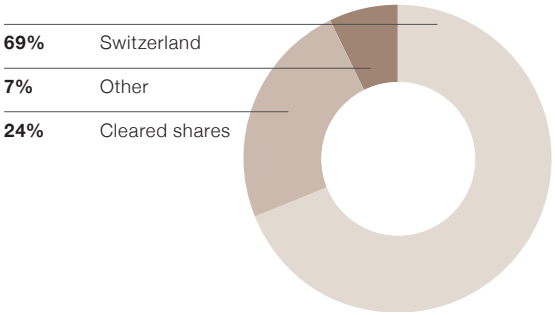
Komax Holding AG is listed on SIX Swiss Exchange. The market capitalization of the Komax Group at the end of 2022 was CHF 1.3 billion (31.12.2021: CHF 1.0 billion).

ISIN	CH0010702154
Security number	1070215
Bloomberg code	KOMN SW
Thomson Reuters code	KOMN.S

GEOGRAPHICAL DISTRIBUTION OF SHAREHOLDINGS

The majority of shares not held in Switzerland are held in Germany, the United Kingdom, and the United States.

As at 31 December 2022



BREAKDOWN OF SHAREHOLDERS BY NUMBER OF REGISTERED SHARES HELD

	31.12.2022	31.12.2021
1–100	3 469	3 536
101–1 000	1 600	1 655
1 001–10 000	218	218
10 001–100 000	29	30
> 100 000	4	4
Total shareholders	**5 320**	**5 443**

The shareholder base decreased by 123 persons to 5 320 in 2022. In the past five years – i. e., since the end of 2017 – the shareholder base has grown by a good 5%.

Free float

The free float as defined by SIX Swiss Exchange stands at 75% (31.12.2021: 100%). Through the combination with Schleuniger, the Komax Group acquired, in Metall Zug AG, an anchor shareholder (25% stake) with a long-term investment horizon.

DISCLOSURE OF SHAREHOLDINGS / SIGNIFICANT SHAREHOLDERS

Under Art. 120 of the Financial Market Infrastructure Act (FinMIA) anyone who acquires or sells equity securities on their own account and thereby attains, falls below, or exceeds the threshold of 3, 5, 10, 15, 20, 25, 33 1/3, 50, or 66 2/3% of the voting rights in a company (whether or not such rights may be exercised) is subject to a reporting obligation. Information on these significant shareholders can be found on page 68 of this report.

The reporting obligation applies to anyone who directly, indirectly, or in concert with third parties acquires or disposes of shares in a company incorporated in Switzerland whose equity securities are listed in whole or in part in Switzerland. It also applies to anyone who can exercise the voting rights attached to such equity securities at their own discretion. Disclosure must be made to the company and stock exchanges on which the equity securities in question are listed.

DIVIDEND POLICY

54.5%
payout ratio

In the strategy, the Board of Directors has defined an attractive dividend policy with a payout ratio of 50–60% of Group earnings after taxes (EAT). It is proposing to the Annual General Meeting of 12 April 2023 distribution of a dividend of CHF 5.50 per share (2021: CHF 4.50). Thereof CHF 2.75 will be distributed from capital contribution reserves, and will therefore be tax-free for natural persons domiciled in Switzerland who hold the shares as part of their private assets. Due to a statutory requirement, a maximum of half of the total distribution may take place from capital contribution reserves. With a payout ratio of 54.5%, the Komax Group fulfils its strategic target.

FINANCIAL CALENDAR

Annual General Meeting	12 April 2023
Half-year results 2023	17 August 2023
Investor Day	28 September 2023
Preliminary information on 2023 financial year	23 January 2024

KOMAX REGISTERED SHARE: KEY DATA

		2022	2021	2020	2019	2018
Share capital as at 31 Dec.	in TCHF	513	385	385	385	385
Number of shares as at 31 Dec.	No.	5 133 333[1]	3 850 000	3 850 000	3 850 000	3 847 510
Average number of outstanding shares	No.	4 273 799	3 843 440	3 845 655	3 843 352	3 830 864
Key data per share						
Par value	CHF	0.10	0.10	0.10	0.10	0.10
Basic earnings	CHF	12.11	7.90	–0.34	3.44	13.52
EBITDA	CHF	20.81	15.70	6.85	9.58	20.52
EBIT	CHF	16.78	11.65	2.93	6.25	15.56
Shareholders' equity	CHF	81.15	68.81	61.42	63.53	73.20
Distribution	CHF	5.50[2]	4.50	0.00	0.00	7.00
Payout ratio	%	54.5[2]	57.0	0.0	0.0	52.0
Dividend yield as at 31 Dec.	%	2.1[2]	1.8	0.0	0.0	3.0
Share price development						
Highest price	CHF	288.00	276.60	238.80	264.00	329.00
Lowest price	CHF	214.00	177.30	122.00	165.10	223.00
Closing price as at 31 Dec.	CHF	257.50	253.00	176.30	236.40	230.00
Average daily trading volume	No.	6 419	8 846	15 809	16 802	13 342
P/E (price-earnings ratio) as at 31 Dec.		21.3	32.0	–518.5	68.7	17.0
Total return per share						
Distribution from prior-year profit	CHF	4.50	0.00	0.00	7.00	6.50
Change in value	CHF	4.50	76.70	–60.10	6.40	–89.50
Total (total return)	CHF	9.00	76.70	–60.10	13.40	–83.00
Annual return[3]	%	3.56	43.51	–25.42	5.83	–25.98

[1] A capital increase for 1 283 333 shares took place within the framework of the combination between Komax and Schleuniger. Following an exchange of shares, Metall Zug AG became the Komax Group's single biggest shareholder (see pages 12/13).
[2] Proposal of Board of Directors of Komax Holding AG: distribution of CHF 5.50 per registered share.
[3] Versus prior-year-end closing price.

Further information on the Komax registered share can be found at www.komaxgroup.com.