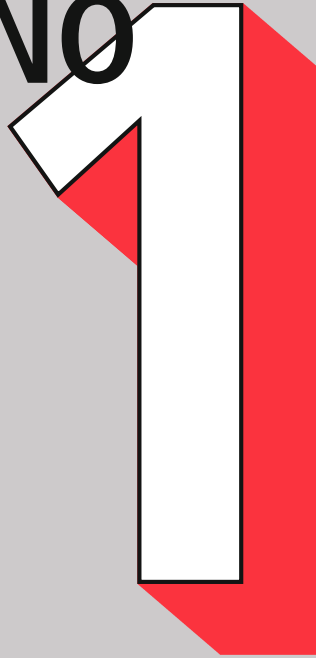


# PHOENIX MECANO

A-Z





# FOCUSING ON FUTURE MARKETS

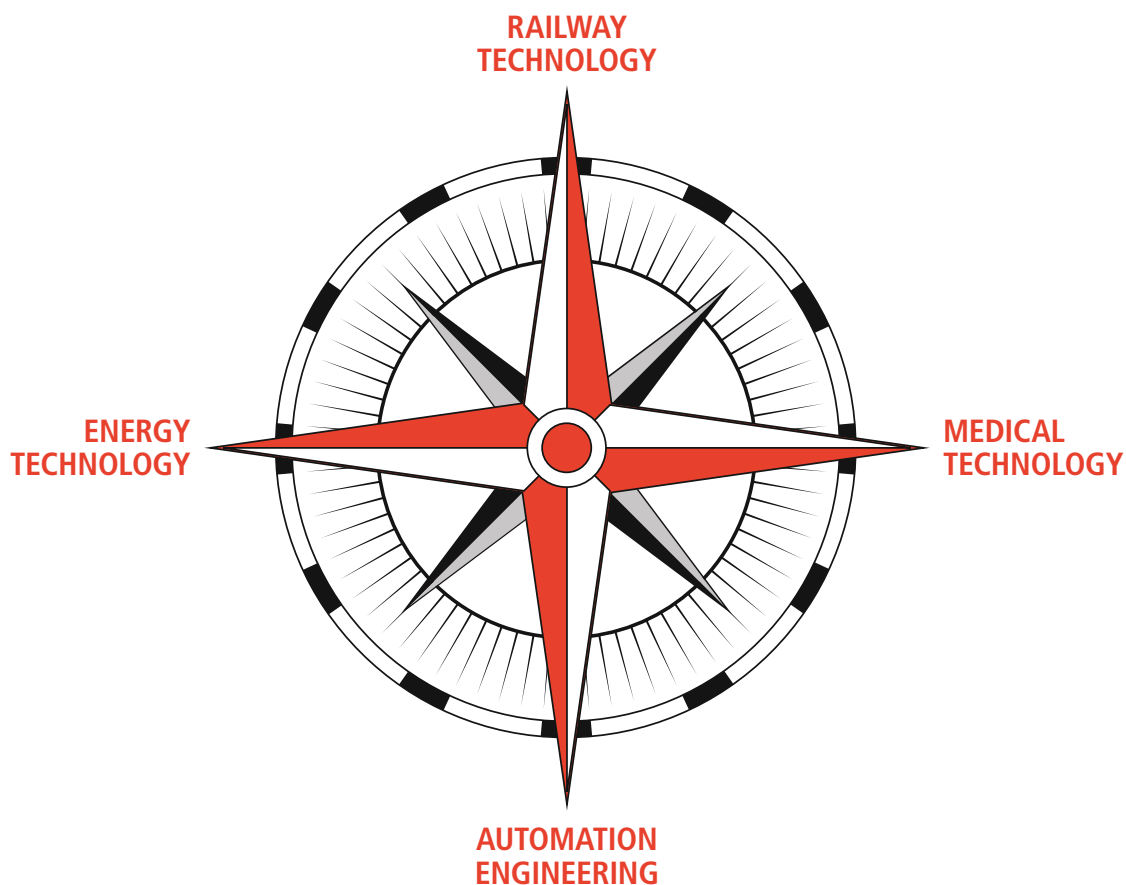
**Our Group's strategic shift towards future markets will safeguard its long-term growth.**

**With digitalisation and the rapid development of microelectronics opening up new opportunities for differentiation, including in traditional markets, our ability to incorporate market trends into the development of innovative new products is helping us to exploit these opportunities. At the same time, we are capitalising on the Group's existing strengths, such as its broad-based global structure.**

**In our lexicon you will discover what makes us unique and how we are positioning ourselves in the markets of the future.**

---

# NAVIGATING TO THE FUTURE



# TOMORROW'S MARKETS



**Benedikt A. Goldkamp**  
Executive Chairman of the Board  
of Directors

## What are the key future markets?

Phoenix Mecano's traditional target markets, such as mechanical engineering, the electrical industry, medical technology and the furniture industry, are constantly evolving in response to technological innovations. Digitalisation and the rise of micro-electronics, with sensors and computer chips now found in many everyday objects, open up new opportunities for us, including in traditional markets. A relatively new development for Phoenix Mecano is the focus on energy generation and distribution markets.

## What opportunities and challenges do they offer the Group?

Firstly, it is essential that these

visible market trends feed into the development of innovative new products. But it is equally important that we capitalise on the Group's existing strengths, such as its broad-based global structure and the consistent customer focus of our sales companies, to create advantages of flexibility and speed.

## What indicators do you look for, and how do you identify trends?

Thanks to our vast customer base numbering over 100 000, we often spot market trends before they appear in the press. However, we have to be particularly wary when such trends are subsidised by governments, as they often turn out not to be sustainable.

## The proportion of Phoenix Mecano's sales generated in Asia has risen from 14% to 24% in recent years. Can you exploit the growth potential in Asia by yourself or are you on the lookout for strategic alliances?

In theory, we aim to exploit Asian growth potential by ourselves, and thanks to our long-standing presence there we are well positioned to do so. However, Asia is expanding more dynamically than any other region in the world. We therefore see partnerships and acquisitions as a way of harnessing this potential as quickly as possible. Given the specific cultural challenges associated with European-Asian cooperation, we always examine such arrangements extremely carefully.

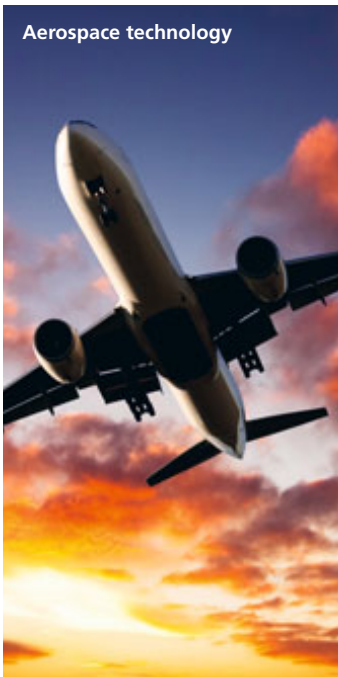


## ADDED VALUE

The Phoenix Mecano Group pursues a long-term growth strategy, which it has been implementing consistently for years. This includes harnessing value-creation potential in existing markets, growth through targeted acquisitions, value-oriented allocation of company resources and a global sales network.

## ASIA

Phoenix Mecano has been present in Asia for many years, with numerous sites in its major growth regions, including India since 1994 and China since 1996. The proportion of sales generated in Asia and the Middle East has risen from 14% to 24% over the past five years, making them increasingly important to the Group as a whole.



## AEROSPACE TECHNOLOGY

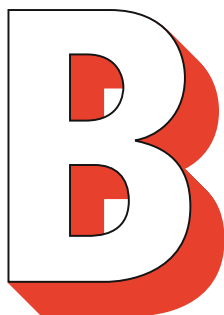
As a manufacturer of power supplies for electronic test equipment, Wiener is one of the Group companies benefiting from steadily rising passenger numbers, the resulting expansion of aircraft fleets and the growth of niche applications.



## AUTOMATION ENGINEERING

Growing global demand is being driven not only by Industry 4.0 but also by strong wage growth and the trend towards high-quality products in emerging markets. Rose+Krieger (linear, profile and pipe connection technology),

Bopla (electronics enclosures), Rose and Kundisch (human machine interfaces) and the companies making up the ELCOM/EMS division are excellently positioned in this market.



## B2B BUSINESS MODEL

All Phoenix Mecano Group companies act as suppliers of mechanical and electrotechnical components in the B2B market. In most cases, these components are critical to the success of our customers' end products.

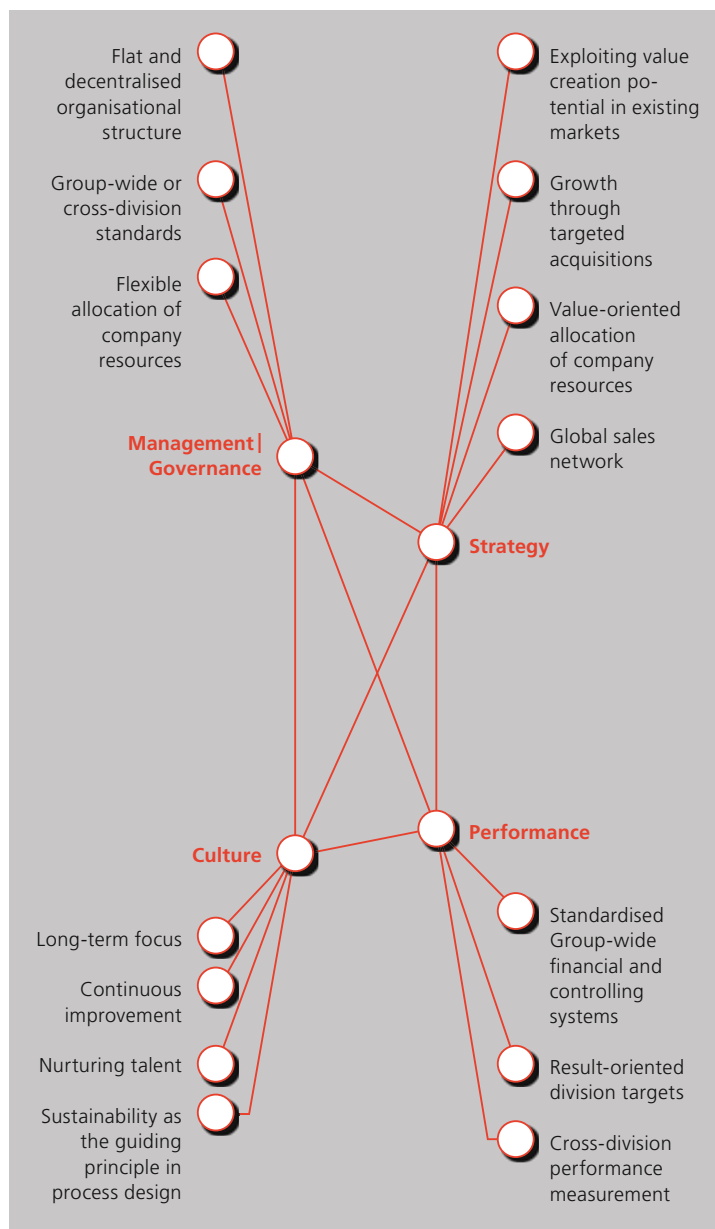
## BONUS MODEL

For the management and the Executive Chairman of the Board of Directors, the bonus is a recognition of exceptional business performance. A bonus is therefore only paid if the result of the period exceeds a minimum amount of 3% of equity for shareholders. No bonus is paid in the event of a loss.

## BUSINESS MODEL

The Phoenix Mecano Group's core business is the development and manufacture of industrial components and modules. Its extensive product range is distinguished by a competitive

cost structure and product features tailored to individual customer needs. Combining demand from customers in a wide range of sectors enables it to achieve economies of scale in industrial product development.

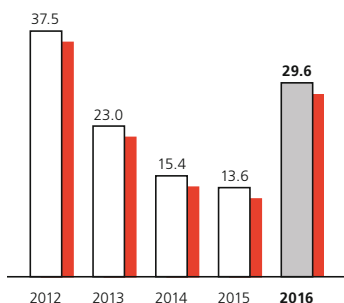




## CASH FLOW

The Phoenix Mecano Group has enjoyed a high level of free cash flow for years, underscoring its stability and together with its strong balance sheet ensuring the financing of organic growth, any acquisitions and regular dividends.

**Free cash flow**  
in EUR million



## COMPETENCE CENTRES

The Group has a number of competence centres that pool technical expertise and forge synergies between Group companies and sites. Key centres include those for aluminium die casting and stainless steel processing in India, plastics manufacturing in Hungary and raw material procurement in Switzerland.

## CORPORATE CULTURE

Combining 64 locations worldwide into a single corporate culture is no easy feat. It can only be achieved in the long term through the willingness to cooperate across divisions and regions, the Group's decentralised management structure and the high degree of responsibility granted to individual Group companies and employees. The values of a growth-oriented technology enterprise and a sustainable family business are equally embedded in the company's culture.

## CUSTOMER FOCUS

Local presence and proximity to customers are critical factors in Phoenix Mecano's success. Direct on-site contact with customers enables product and solution requirements and other relevant parameters in each local market to be pinpointed effectively.

## CUSTOMISED SOLUTIONS

These are the core of all business activities. Phoenix Mecano develops and produces standard industrial components for customers in the mechanical engineering, electrical and furniture industries. The Group exploits economies of scale by pooling customer demand from different industries and areas of application in its global network of production sites. Thanks to this favourable cost position and its ability to customise standard components across its decentralised distribution network, the Group has been able to establish itself as a market leader in industrial niches. Its network brings these processing technologies and services directly to customers.





## DECENTRALISED MANAGEMENT STRUCTURE

The Group's overall structure has always been very lean. Operational responsibility lies with the management, assisted by the operational managers of the Group's divisions, main business units and regions.

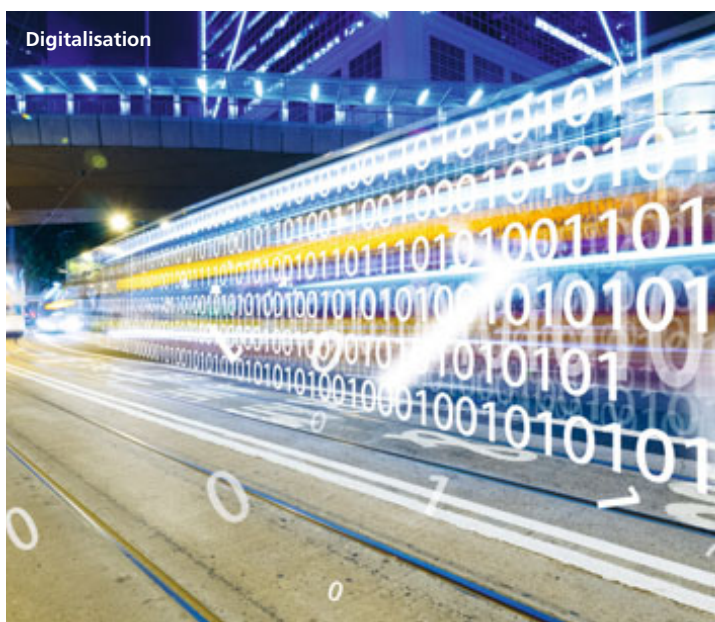
This management structure ensures proximity to markets and enables swift decision-making and speedy implementation.

## DIGITALISATION

Increasing digitalisation is synonymous with growth for Phoenix Mecano. It generates demand for electromechanical components such as plugs and coding switches as well as the enclosures used to package and protect the electronics inside digital units. Within the Group, digitalisation enables optimised production and more efficient marketing.

## DIVIDEND

The target payout ratio for dividend payments is 40–50% of result after tax, adjusted for special factors. The dividend is currently CHF 15 per share. Phoenix Mecano has made regular dividend payments since going public in 1988.



## DIVISIONS

Over time, Phoenix Mecano subsidiaries have come to be divided into three divisions, Enclosures, Mechanical Components and ELCOM/EMS. Importantly, however, knowledge is transferred between the divisions, allowing the Group to offer its customers comprehensive solutions.

### ENCLOSURES

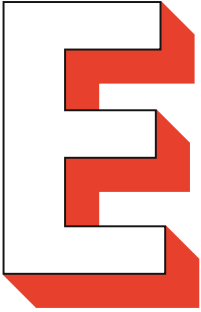
- BOPLA
- KUNDISCH
- ROSE

### MECHANICAL COMPONENTS

- DEWERT OKIN
- RK ROSE + KRIEGER

### ELCOM/EMS

- ATON
- HARTMANN
- HARTMANN ELECTRONIC
- HARTU
- ISMET
- PHOENIX MECANO DIGITAL ELECTRONIC
- PM SPECIAL MEASURING SYSTEMS
- PTR
- REDUR
- WIENER
- WIJDEVEN



## ELCOM/EMS

The ELCOM/EMS division's products are used wherever electrical energy flows, whether it be high, medium or low voltage, alternating or direct current. They can be found in all industrial sectors, from medical technology, astrophysics and aerospace, to power distribution networks, switchgear and renewable energy.

ELCOM/EMS: REDUR



## EMPLOYEES

Phoenix Mecano's success is built on its 6000 or so employees. Its very low employee turnover is largely attributable to three success factors: successful growth, sustainability and a management culture that fosters mutual trust, creative freedom and personal responsibility.



Energy technology

SINCE 2012

530  
NEW JOBS

## ENERGY TECHNOLOGY

Phoenix Mecano's current measuring systems accurately and reliably record the voltage and current in power networks. This information is used to detect network outages quickly, thereby preventing damage to system-critical electrotechnical components and facilities.

## ENCLOSURES

Phoenix Mecano enclosures protect all types of electronic and electrical equipment, offering exactly the kind of protection the customer requires. Areas of application include plant engineering, railway, automotive and medical technology and offshore oil platforms. In addition to enclosures, Phoenix Mecano also supplies input units such as membrane keyboards and keypads, short-stroke keys, capacitive buttons and touchscreens.

Enclosures: ROSE



## ENVIRONMENT

Environmentally responsible behaviour and the sustainable use of natural resources are cornerstones of our business philosophy. Seven companies have acquired ISO 14001 environmental certification, while 19 meet the requirements of ISO 9001. Climate protection measures at Phoenix Mecano Komponenten AG in Stein am Rhein have led to a 37% reduction in CO<sub>2</sub> emissions. Energy audits were carried out at all the Group's German subsidiaries in 2016, which identified further energy-saving measures.

### Environmental management systems certified

Bopla Gehäuse Systeme GmbH	ISO 14001:2004	Germany
DewertOkin GmbH	ISO 14001:2004	Germany
Hartmann Codier GmbH	ISO 14001:2004	Germany
Ismet GmbH	ISO 14001:2008	Germany
Phoenix Mecano Kecske-mét Kft.	ISO 14001:2004	Hungary
PTR Messtechnik GmbH + Co. KG	ISO 14001:2009	Germany
Wijdevan B.V.	Carbon Footprint	The Netherlands

## ERGONOMIC WORKSTATIONS

Rose + Krieger develops and sells high-quality, ergonomic industrial workstations perfectly tailored to the user and work process. Rose + Krieger and DewertOkin supply the rapidly expanding market for lifting columns used in office furniture. All these products enhance users' well-being and efficiency

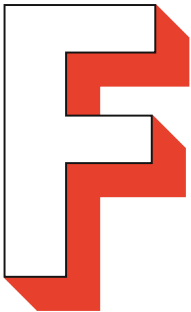
## EQUITY

Equity in relation to total assets/capital has remained stable for years at over 60%. This very solid base provides the necessary financial leeway to exploit organic and acquisition-related growth opportunities.

### EQUITY 2016

272.8

EUR MILLION



## FUTURE MARKETS

With a view to sustainable business management, Phoenix Mecano steps up its involvement in successful existing segments and enters emerging markets with lucrative economic potential. It also helps its customers around the world to break into promising growth markets. Activities of

increasing importance to the economic region concerned are expanded, with an emphasis on local value added.

## FLEXIBILITY

One of the Group's guiding principles is to exploit the agility of production facilities and sales units as a competitive advantage. These units are therefore characterised by decentralised organisational structures, flat hierarchies and fast decision-making. The shared use of production sites and sales companies also helps to pool expertise, processes and local market knowledge, resulting in a short time-to-market and products tailored to market requirements.



## GLOBAL PRESENCE

Phoenix Mecano's global presence at 64 locations fosters strong customer loyalty and enables it to support its customers' growth close at hand while offering the same range of high-quality products and services both globally and locally.

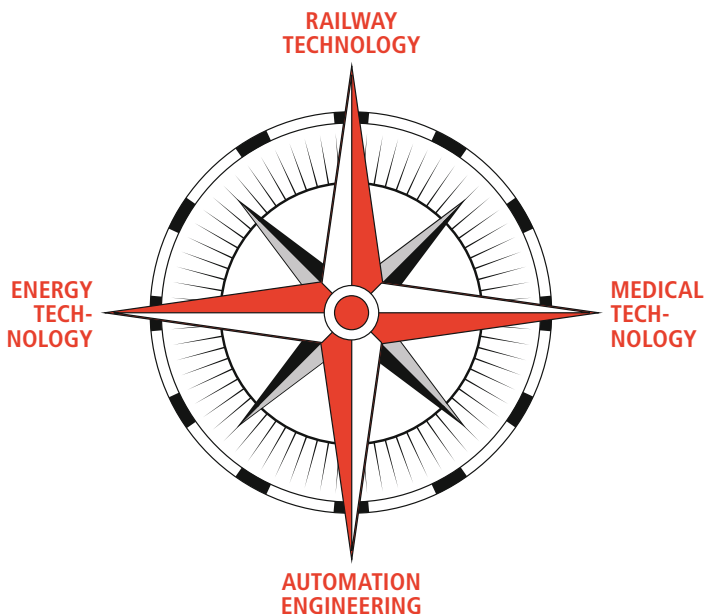
**64** LOCATIONS  
WORLDWIDE

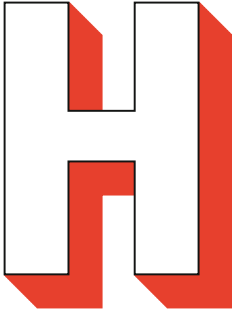
## GLOBAL SOURCING

As well as manufacturing in low-cost countries, Phoenix Mecano has built up a global network of buyers to source raw materials and resources in countries offering the best value for money. By combining the procurement needs of all its subsidiaries, it can negotiate better prices thanks to higher purchase volumes.

## GROWTH

Phoenix Mecano has a long-term growth strategy. Innovation and investment in product infrastructure and expertise also take place counter-cyclically where appropriate, ensuring healthy organic growth for the Group.





## HISTORY

Phoenix Mecano was founded in 1975 and listed on the Swiss stock exchange in 1988. From the outset, its focus was on the high-quality manufacture of niche products. Today, Phoenix Mecano Group companies provide an extensive range of stand-alone products, through to entire system solutions, for use in a variety of industrial applications.

# 1988

**LISTING ON  
THE SWISS STOCK  
EXCHANGE**

## HUNGARY

Kecskemét is home to around 40 000 m<sup>2</sup> of manufacturing space, used for all three divisions. The broad range of technologies deployed include plastic injection moulding, machining, painting and a variety of complex assembly services. The site is also home to its own development department and a state-of-the-art quality testing lab.

## HVDC – HIGH-VOLTAGE, DIRECT CURRENT

HVDC transmission technology has matured and now offers a superior alternative to alternating current (AC) transmission over long distances. With the increasing use of renewable energy sources and the decentralised and on-site generation of large quantities of power, HVDC is becoming an increasingly attractive means of energy transmission.

The current and voltage measuring systems developed and produced by Phoenix Mecano companies enable these high DC voltages to be measured quickly, accurately and reliably in the most technically demanding of conditions. These systems protect the installations that convert DC into AC and vice versa, as well as voltage transformation equipment. They are key to ensuring the stability of increasingly complex international power networks and smart grids.



HVDC – high-voltage, direct current





## INDUSTRIAL COMPUTING

Hartmann Electronic's power and data transmission products are leaders in the high-speed applications niche. This is a market with huge growth potential, driven by digitalisation and the connectivity of high-performance computing systems in numerous fields of application in both research and industry.



Industrial computing

## INTERNATIONALISATION

Following the founding of Phoenix Mecano AG in Switzerland in 1975 and the opening of its first plants in Germany, the Group expanded into the US in 1981 and then across Europe – Italy, France, Belgium and Hungary – in the late 1980s. Entry into Asia, now a key market, began in India in 1994. A sales company was established in Brazil in 1995, followed by expansion to China in 1996. Since the opening of its Australian branch, Phoenix Mecano has been present on all six economically relevant continents.



## INVESTMENT

Regular investments in expanding and modernising production infrastructure reflect Phoenix Mecano's philosophy of steadily developing production and process expertise, even countercyclically where appropriate. This allows the Group to reap above-average rewards during economic upswings.

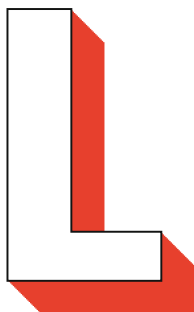


## J2OX

Journey towards Operational Excellence (J2OX) is a long-term, Group-wide initiative aimed at delivering continuous improvement in operational performance. This means that customer requirements can be met in a faster, more reliable and more cost-effective way, despite rising demands and increased complexity in the global industrial components business. Phoenix Mecano employees at all levels of the Group are central to J2OX. By promoting personal responsibility based on structured, cross-functional problem solving as part of a team, the Group leverages the knowledge and ability of all its employees with the aim of preventing loss and waste.



JOURNEY TOWARDS OPERATIONAL EXCELLENCE



## MEDICAL TECHNOLOGY

**The medical technology market is growing by at least 5% a year, and digitalisation is already well advanced in the sector. All three Phoenix Mecano divisions are participating in this expansion. In-demand products include linear actuators, torsion-free lifting columns, membrane keypads, touchscreen solutions, electrotechnical components and enclosures.**

## LOW-COST

Since it was founded in 1975, the Phoenix Mecano Group has capitalised on the advantages offered by low-cost countries within its supply chain, including its own production plants in Eastern Europe since 1993 and in Asia since 1994. Within this now global production network, it has established competence centres aimed at fostering leadership in specific fields of process and product technology through continuous improvements in areas such as productivity, quality, delivery reliability and flexibility, as well as targeted promotion of local sales opportunities for Phoenix Mecano products.



**Mechanical Components:**  
DEWERT

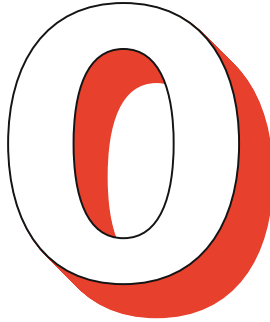
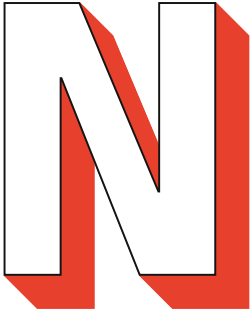
## MECHANICAL COMPONENTS

This division's wide range of linear actuators, electric cylinders and lifting columns are deployed in industry, workstation installation and the home and hospital care sector. Its profile assembly systems can be used to assemble peripheral production systems right through to entire production lines.

**Medical technology**

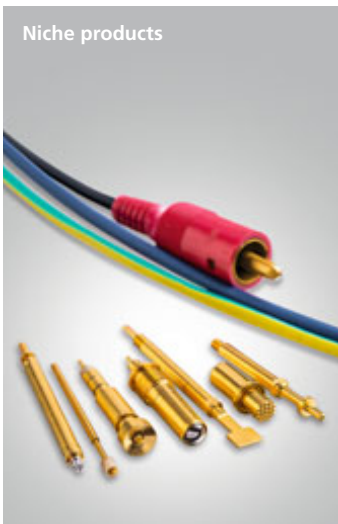


akrus GmbH & Co KG



## NICHE PRODUCTS

With many of our customers active in market niches that use specific application technology, developing and manufacturing customised solutions is an essential part of what we do. The production of small quantities of parts in a wide range of variations requires the utmost speed and flexibility, but also generates a constant stream of unique product innovations. Such solutions are often instrumental in the development of new industry standards.

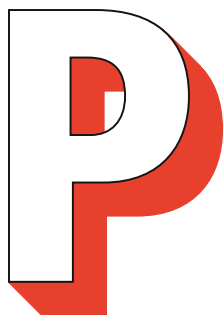


## OIL & GAS

Aside from its pioneering products, Phoenix Mecano's success factors in this market are its global teamwork, flexibility and speed. These have enabled it to buck the prevailing trend and expand sales in this sector over the past three years. The Group is also well equipped to achieve further substantial sales growth as investment volumes pick up.







## PERFECTING

The goal of our management philosophy is to foster a culture of continuous improvement at all levels of the hierarchy. This process began in 2011 with our J2OX programme. The ongoing development of our corporate culture allows us to make continual operational improvements, including a striving for maximum efficiency, top quality and reliable adherence to delivery deadlines, optimised products, processes and services and the reduction of operating costs.

## PRODUCTS

Over a million products and product variants ensure customer satisfaction while making the Group more resilient to market and sector fluctuations. They are used in a wide range of applications, sometimes as stand-alone products, often in conjunction with other Phoenix Mecano products and, increasingly, as entire system solutions.

OVER

1000000 PRODUCTS

## PRODUCTION

Many products are manufactured centrally as basic modules. The biggest production locations are Germany, Tunisia,

India, Hungary and China. Customised specifications, on the other hand, are undertaken locally where possible, at Phoenix Mecano's global network of processing plants.



Production

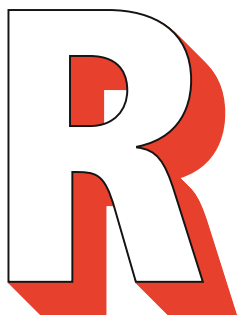


## QUALITY

Phoenix Mecano strives for perfection by continuously improving its products and processes through committed team work. Where possible, it has its quality and environmental management systems certified according to recognised standards.

### Certification standards used in subsidiaries worldwide

Bopla Gehäuse Systeme GmbH	ISO 9001:2008	Germany
DewertOkin GmbH	ISO 9001:2000	Germany
Hartmann Codier GmbH	ISO 9001:2008	Germany
Hartmann Electronic GmbH	ISO 9001:2008	Germany
Ismet GmbH	ISO 9001:2008	Germany
Kundisch GmbH + Co. KG	ISO 9001:2000	Germany
Mecano Components (Shanghai) Co., Ltd.	ISO 9001:2008	China
Phoenix Mecano Components (Taicang) Co., Ltd.	ISO 9001:2008	China
Phoenix Mecano Digital Elektronik GmbH	ISO 9001:2008 / ISO / TS 16949:2009	Germany
Phoenix Mecano Inc.	ISO 9001:2008	USA
Phoenix Mecano (India) Pvt. Ltd.	ISO 9001:2008	India
Phoenix Mecano Kecskemét Kft.	ISO 9001:2008	Hungary
Phoenix Mecano Komponenten AG	ISO 9001:2008	Switzerland
Phoenix Mecano Ltd.	BS EN ISO 9001:2008	Great Britain
Phoenix Mecano S.E. Asia Pte Ltd.	ISO 9001:2000	Singapore
PTR Messtechnik GmbH + Co. KG	ISO 9001:2008	Germany
RK Rose + Krieger GmbH	ISO 9001:2008	Germany
Rose Systemtechnik GmbH	ISO 9001:2008	Germany
Wijdeven B.V.	ISO 9001:2008	The Netherlands



## RAILWAY TECHNOLOGY

Hartmann Electronic manufactures high-tech components for high-performance processors used in leading train control systems. Rose supplies enclosures and electronic components whose strength and durability make them the number one choice for many companies. Passive electrotechnical components produced by our ELCOM/EMS division's connection and measurement technology companies are also deployed in this sector.

## RESPONSIBILITY

Sustainable success is at the heart of our responsible approach to business, an approach based on responsibility towards our employees, the environment and society. Phoenix Mecano continuously nurtures its employees and is committed to helping young people in all corners of the globe. Socially responsible behaviour and the sustainable use of resources are the cornerstones of our business philosophy. This belief is also enshrined in our Code of Conduct.



## RISK MANAGEMENT

Phoenix Mecano's business model is based on covering a broad range of sectors, customers and products. This means that the

Group is not heavily dependent on the performance of individual sectors and customers and the risk to its business from market turbulence and disruptive technologies is small.



## SALES COMPANIES

Establishing a sales company is the Group's usual way of entering new countries and hence new markets. Once that firm has successfully opened up the market, it is possible to set up production companies and begin the customised manufacture and machining of components locally. Local sales companies are therefore crucial to overall success.

### SALES COMPANIES

## SHARE

The share capital consists of 960 500 bearer shares, all giving entitlement to vote on the 'one share - one vote' principle. There are no restrictions on transferability. Capital that is not required for internal growth is returned to shareholders in the form of dividends, par value repayments and share buy-backs. The share capital has not been increased since Phoenix Mecano went public in 1988.



Phoenix Mecano Komponenten AG  
and the headquarters of Phoenix Mecano Holding, Stein am Rhein

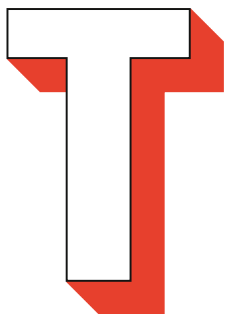
## SWITZERLAND

Switzerland is where Phoenix Mecano was founded and subsequently floated on the stock exchange. Stein am Rhein is home to the holding company and the global purchasing competence centre, while Phoenix Mecano Management AG is based in Kloten.

The production company Phoenix Mecano Komponenten AG, also based in Stein am Rhein, supplies the Swiss market with a wide range of products by Phoenix Mecano subsidiaries. Mechanical components for specialist applications are also developed in Switzerland, from where they are distributed worldwide.

It generated gross sales of EUR 22.6 million in 2016, with a workforce of 113. A further 15 people are employed at Phoenix Mecano Management AG, which is responsible for the operational management of the Phoenix Mecano Group.





## TECHNOLOGY COMPANY

Phoenix Mecano is a manufacturer of innovative, technical components, which are demanding in terms of both their application and manufacture. So demanding that new competitors face high barriers to entry. This is evidenced by the many accolades the Group has won for its innovation. Its subsidiary Rose + Krieger has repeatedly figured in the Top 100 most innovative SMEs in Germany, most recently in 2016.

TOP

**100**  
INNOVATOR OF  
GERMANY'S SMEs

## TOUCHSCREENS

Touchscreens have been in widespread use in everyday life, medical technology and industry for some time, and can now also be operated while wearing work gloves. This market has been growing and continues to grow by around 10% a year. The latest trend is towards multi-touch screens, which can be operated with more than one finger. Kundisch supplies systems tailored to this area.



Touchscreens

## TRANSFORMERS

Transformers adapt supplied voltage to the needs of the consumer device and are used wherever current flows. They vary from thumbnail-sized devices, with a rating of less than a thousandth of a volt-ampere, to the biggest units weighing hundreds of tonnes, which are capable of handling several million volt-

amperes. The global transformer market is worth around EUR 10 billion a year. Group firms Wijdeven, Hartu and Ismet are leading players in this sector. One field of application for instrument transformer products is high-voltage, direct current (HVDC) technology. PM Special Measuring Systems is active in this area, which has good growth prospects.

Transformers

