

# KLOSE | INDUSTRIAL SERVICE

YOUR TOTAL SOLUTION PARTNER IN ASIA-PACIFIC



INDUSTRIAL RELOCATIONS



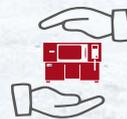
SPECIALTY LOGISTICS



FIELD SERVICE OUTSOURCING



INDUSTRIAL PACKAGING



MAINTENANCE SUPPORT



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YOUR PARTNER IN ASIA PACIFIC

# ORGANISATION OVERVIEW



**FOUNDED IN  
1935**

Steinheim an der Murr in the South of Germany marks the birthplace of what is now known as the KLOSE Group today. Founded as a regional transport company, we quickly developed into a globally active group serving industrial companies on a daily basis.



**FAMILY-RUN  
BUSINESS**

Founded by Ernst Kurzenberger, grandfather of the current Managing Partner, Mr. Hans-Martin Klose. The 4th generation has been actively involved in the business since 2014: Maximilian Klose manages APAC operations.



**GLOBALLY  
CONNECTED**

From our global headquarters in Bietigheim, Germany, to our Asia headquarters in Kuala Lumpur, Malaysia. We are active in South Asia, Southeast Asia, South Korea, Taiwan, and Japan, as well as Australia and New Zealand, Europe, and North America.



**CERTIFIED  
QUALITY**

By TUV Nord under ISO 9001 (Quality Management) and as one of the first companies in our sector under ISO 45001 (Environmental, Health and Safety). But more importantly, by our existing customers in the form of Service & Partnership Awards.

## YOUR SPECIALIST FOR ASIA

Founded and headquartered in Germany in 1935, we now predominantly provide our services throughout Southeast Asia, India, Bangladesh, Taiwan, South Korea, Japan, Australia, and New Zealand. With more than 85 years in the industry, we have a well-established network of service locations, partners, and other connections throughout the region. Our customers immensely value our German mindset and corporate culture, with quality, safety, reliability and efficiency forming the cornerstones of all our activities.

We manage our operations in the region and dispatch highly qualified technicians from our APAC headquarters in Kuala Lumpur, Malaysia. You need a machine or even an entire factory relocated from France to Vietnam? We can handle dismantling in France, arrange transportation, import, and conduct reassembly & commissioning until 'ready for production' in Vietnam. To provide you with the highest quality and effective costing for such projects, our site manager will typically be dispatched from our headquarters in Germany, while technicians will come from our service location in Vietnam. This guarantees efficient, reliable, and goal-oriented execution as the technician handling dismantling will later also be responsible for reinstallation.

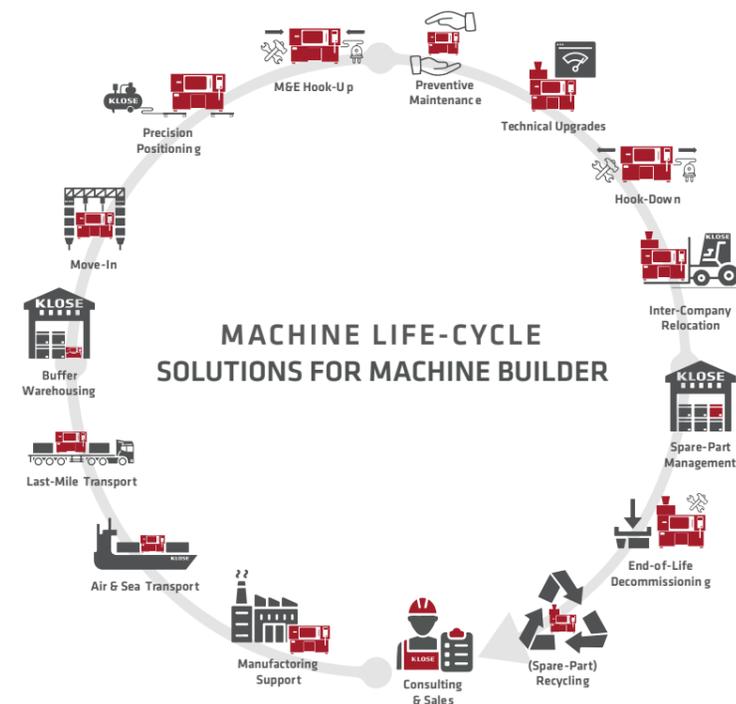
Furthermore, our Field Service Division is highly adapted to Asia's local requirements and culture. We understand the needs and wishes of our end customers in the region and know how to adapt your service offering to them. In addition, our service locations are strategically located throughout the region. Our customers leverage them to offer their end-customers reduced reaction times and significantly lower travel costs.

## A PARTNER OF THE MACHINE BUILDERS

We offer tailor-made solutions for the mechanical engineering sector. Whether you are an SME-sized machine builder wanting to enter Asian markets successfully, or a globally active machine manufacturer looking to improve service quality and cut operative costs in Asia.

We provide end-to-end services, from on-premise assistance during the manufacturing process (or by outsourcing a back-end assembly overseas) to managing logistics until the destination, including move-in, positioning, assembly, hook-up and commissioning. We also provide a full range of after-sales services, including (preventive) maintenance, breakdown support, call-centre operation, technical upgrades, and more.

In addition, we act as an appointed agent or distributor to sell machines or spare parts on your behalf in Asia-Pacific, leveraging our excellent connections and insights into local markets and access to decision makers.



## A FOUNDING MEMBER OF GIRN

In recent years, global business has been changing at an unprecedented pace; new technologies, changing regulations, and rapid innovations have hugely impacted the industry. The members of the Global Industrial Relocation Network (GIRN) are an important part of this industrial landscape, as we cater to the increasing demand for highly complex international relocation projects.

The network was founded with the clear vision of allying experts in the industrial dismantling and reinstallation industry. This network has been created by professionals for professionals, all of whom have outstanding know-how in the field of industrial equipment and plant relocation in their region. We put personal relationships at the heart of everything we do and believe they are more important than ever in an increasingly short-term, impersonal, and transactional world.



WHO IS KLOSE?

# EQUIPMENT OVERVIEW



**ELECTRIC PICK & CARRY CRANE**  
Up to 16.0T capacity



**ELECTRIC COUNTERBALANCE FORKLIFT**  
From 2.5 - 10.5T capacity



**HYDRAULIC GANTRY**  
Electric from 30.0 - 65.0T capacity



**TOOLCONTAINER**  
10FT / 20FT / 40FT Fully Equipped



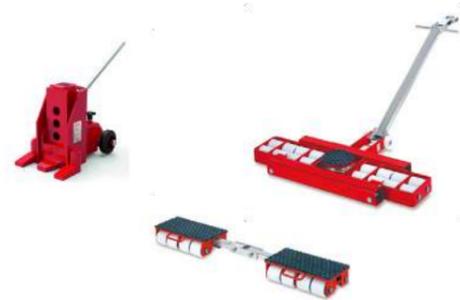
**DIESEL / LPG COUNTERBALANCE FORKLIFT**  
From 3.5 - 15.0T capacity



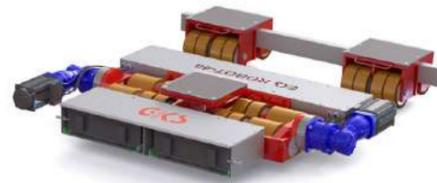
**SELFLOADER**  
RoRo transport up to 20.0T



**GIGALINER**  
C/w carry-on forklift or doubledeck



**MACHINE JACKS & HEAVY-DUTY SKATES**  
Steerable / Fixed / Rotational up to 20.0T ea.



**ROBOTIZED SKATE**  
Battery powered and up to 40.0T



**AIRPAD SYSTEM**  
Up to 20.0T capacity



**LEVELING & ALIGNMENT TOOLS**  
Up to 0.001mm/m<sup>2</sup> precision



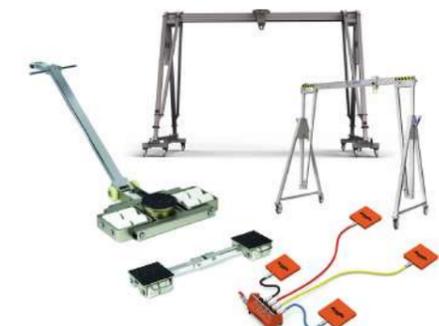
**MANUAL LIFTING FRAMES**  
From 2.5 to 10.0T capacity



**TOOLSETS**  
Electric / Mechanic / Pneumatic / Hydraulic / ...



**REMOTE FIELD TEAM**  
Assisted Reality & ad-hoc support



**CLEANROOM EQUIPMENT**  
and other special environment tools

and so much more...

# SERVICES OVERVIEW

## KLOSE | GROUP

### INDUSTRIAL SERVICE

Our Industrial Service Division is your global partner for any industrial relocation involving rigging, millwrighting, heavy lifting, and more. KLOSE Industrial Service has its European, Asia-Pacific, and American headquarters in Germany, Malaysia, and the United States, respectively.

Whether moving a single machine or relocating an entire factory, we can take care of your inter-building, intercity, and intercontinental relocation needs. We are fully equipped to handle industrial relocations regardless of size and complexity and all with in-house resources on a global stage.

Our services include:

- » Single-machine or complete factory relocation.
- » Global relocation from planning to power-on.
- » Dismantling, hook-down, facility disconnection.
- » Machinery decontamination & cleaning.
- » Packaging services.
- » Arranging transport and managing logistics.
- » Assistance with import at destination.
- » Last-mile transport, incl. heavy haulage.
- » Reassembly (mech/elec/pneumatic/hydr.).
- » Hook-up and facility connections.
- » Commissioning and I/O testing.
- » Clean-room move-in & installations

Learn more on Pages 10-11.

### FIELD SERVICE

Working exclusively for the machine builder, our Field Service Division is your partner for anything from machine and spare-part sales to commissioning, maintenance, and breakdown support in Asia-Pacific. We employ dedicated and highly skilled technicians trained at the OEM's manufacturing and installation sites to ensure the highest service quality.

Furthermore, our team of consultants are ready to help small- & medium-sized machine builders successfully enter Asian markets or grow their existing foothold in line with local requirements and cultural nuances.

Our services include:

- » Support during machine manufacture.
- » Outsourced final assembly overseas.
- » Consulting for market entry & service concepts.
- » Advanced training & const. improvement.
- » From assembly to commissioning & testing.
- » Operator training & handover.
- » 24/7 breakdown support.
- » Call-center operation / online assistance.
- » Spare-part management.
- » Sales of machines, components & spare parts.
- » Enabling new revenue streams for OEM.
- » Outsourcing all Field Service Activities in APAC.

Learn more on Pages 14-15.

### LOGISTIC SERVICE

Our Logistic Service Division, which is primarily active in Asia-Pacific, is operating our own (bonded) warehouses and prime-mover, self-loader, as well as heavy-haulage truck fleet. Our European and American customers can also benefit from our warehousing and value-added services in Germany and the United States.

Our global partner network equips us to assist with the worldwide transport of your equipment via air, sea, or land. In addition, we provide logistics experts who will guide you every step of the way and ensure your cargo arrives safely and on time.

Our services include:

- » Arranging sea & air transport.
- » Assistance with customs clearance & import.
- » Last-mile transport, incl. heavy haulage.
- » Escalator & elevator logistics.
- » MHE logistics.
- » Spare-part warehousing & inventory.
- » Buffer warehousing for machines.
- » Temperature-controlled storage.
- » Bonded warehouses.
- » Value-added services, incl. repackaging.
- » Construction deliveries with carry-on forklift.
- » On-site logistics, incl. site management.

Learn more on Pages 12-13.

### PACKAGING SERVICE

Whether your goods are big or small, heavy or light; our packaging division has decades of experience in manufacturing and executing packaging for air, sea, and land transport, ensuring the proper and optimal protection along the entire logistics process. We understand that we are not packing just a machine but a valuable asset.

KLOSE offers its own woodworking shop and packaging design experts to create highly customized solutions for our customers. We have extensive expertise in designing, fabricating, and executing packaging for heavy and oversized cargo.

Our services include:

- » Packaging engineering services.
- » 3D design of crates, boxes and skids.
- » In-house manufacturing of wooden packaging.
- » Vacuum packaging in alu-verbund.
- » Anti-vibration packaging for CNC and others.
- » ESD-safe packaging solutions and products.
- » On-site/off-site packaging service.
- » Tool removal, cleaning, and packing.
- » Container storage and stuffing.
- » Flat rack lashing & cargo securing.
- » Lashing inspection & certification.
- » Fumigation/heat treatment/ISPM15 compl.

Learn more on Pages 16-17.

SCOPE OF SERVICE:

# RELOCATIONS

**KLOSE** has specially trained experts who understand our customers' machinery and the importance of a smooth relocation process. Regardless whether it involves a single machine, an entire factory, inter-building, intercity, or intercontinental relocation, or even machinery that is new or used, small or big, heavy or light, or if it's placed in a cleanroom or not. Our experts handle all aspects of your relocation in-house: From mechanical & electrical dismantling, facility hook-down, move-out, and packaging to heavy haulage, including unloading, uncrating, move-in, rough & final positioning, levelling and alignment, reassembly, hook-up and commissioning. Supported by our strong Project Management and Engineering Departments and our extensive special equipments, we are your reliable one-stop partner.

## PROJECT MANAGEMENT

From feasibility studies, initial consulting, and engineering to monitoring work execution and milestone compliance: Our capable teams will support you the entire way. Before work initiates, we can simulate transport paths and rigging methods, develop EHS concepts, and provide detailed method statements. In addition, our fully digitalised processes ensure you can monitor each step via our **KLOSE** ePortal.

## INDUSTRIAL PACKAGING

With decades of experience in this industry, we ensure proper & optimal protection of your goods across the entire logistics process in all modes of transport. **KLOSE** has its own woodworking and packaging experts to create highly customised solutions for our clients. Thanks to our 3D design process, we can provide you with lifelike drawings and work together to find the ideal solution for all your needs.

## REMOTE FIELD TEAM

**KLOSE** is an industry leader when it comes to digitalisation and innovative solutions for Industry 4.0. In 2019, we implemented the 'Remote Field Team' (or „RFT“), our proprietary solution for virtual remote support. With RFT, your specialist can be on-site virtually and see through the eyes of our on-site technician. RFT transmits the exact field of view of the on-site technician and allows seamless audio communication. Furthermore, thanks to an integrated display, the specialist can share drawings, manuals, or other documents with the on-site technician and can even place virtual AR markers.



## OUR SCOPE IN DETAIL

- > Feasibility studies, project & milestone plan development, and method statement drafting.
- > Creating detailed EHS studies and concepts in line with the KLOSE EHS policy and customer's EHS policy.
- > 3D Laser scanning and conversion in CAD drawings before dismantling.
- > Detailed matchmarking, labelling, and inventory of individual segments and parts.
- > Mechanical, electrical, pneumatic, and hydraulic dismantling of all components.
- > Metal fabrication, alteration, and other related steelworks.
- > Rigging, lift-down, and move-out of all components using our specialised equipment.
- > Packaging of components as required to protect against damage and environmental forces.
- > (International) Transport via road, air or sea; In TH, MY & SG using our fleet of low-loader trucks.
- > Assistance with customs clearance and other documentation as required.
- > Unloading, uncrating, and delivery inspection. Move-in, rigging, and final positioning.
- > Reassembly and installation until ready for production, including I/O and function testing.





## SCOPE OF SERVICE:

# LOGISTICS

**KLOSE** can handle all your logistic needs in Asia-Pacific, from assistance with the import/export of your machinery or equipment to buffer storage and transportation, including heavy haulage. As part of a detailed consultation, we record project data, volumes, and deadlines according to your requirements. We can handle any size, shape, or weight. With our fleet of heavy haulage and oversize cargo trucks, such as one of the first Gigaliners in Southeast Asia, we cater to your needs and devise optimal solutions to safely and securely transport your cargo. We are also your partner for spare-part management, offering bonded warehouses with excellent connections to major air- & seaports. Our logistics experts deeply understand how to optimise inventory, reduce logistics costs, and shorten dispatch and delivery times, all while improving your service quality.

## WAREHOUSING

Whether for temporary storage, because your facility is not ready for tool move-in, or a more long-term requirement, **KLOSE** has ample warehouse spaces. Selected facilities are also equipped with overhead cranes to handle heavy and oversized cargo, while others are temperature and humidity-controlled, catering to sensitive cargo. Thanks to our diverse network of partners, we can offer warehousing solutions globally.

## SPARE PART MANAGEMENT

**KLOSE** is your partner for spare-part management in Asia-Pacific, offering bonded or regular warehouses with excellent connections to major air- & seaports in addition to express distribution networks. Our teams can handle inventory management, picking, (re) packaging, value-added services, dispatch and more. In addition, we can use either our in-house inventory software or work directly on your systems.

## GIGALINER #1

Primarily for the elevator & escalator business but used by other customers as well, **KLOSE** has developed and been operating the first gigaliner in Southeast Asia with a carry-on foldable forklift. Its extra-large interior, measuring over 100 cubic meters, and capability to carry a forklift even when fully loaded make this truck remarkably unique. As a result, we can provide significantly reduced delivery times and a simpler process for transport to construction sites. Furthermore, the **KLOSE** gigaliner enables the transport of machinery and sensitive cargo up to 4m in height and 3m in width under full covers - especially suitable for sensitive machinery.



## OUR SCOPE IN DETAIL

- > Analysing volumes, deadlines, transport requirements, and further details to evaluate feasibility.
- > Packing your cargo, if required ESD-safe, anti-corrosion, anti-vibration, and more.
- > Arranging air & sea transport through our strong partner network at competitive rates.
- > Assisting with customs clearance, documentation, and import licenses/requirements throughout APAC.
- > Last-mile transport, including heavy haulage and oversize cargo, using our fleet of trucks (MY/TH/SG).
- > Customised delivery solutions for construction sites, including unloading and placement at designated areas.
- > Customised logistic solutions for escalator and elevator businesses with trained delivery experts.
- > General warehousing and storage of cargo in non-bonded warehouses of up to 100,000 sq. ft.
- > Specialised warehousing solutions, including temperature- & humidity-controlled environments.
- > Bonded warehousing for temporary storage of parts, machines and other cargo.
- > Spare-part management, including stock levels, delivery times and overall availability optimisation.
- > Warehousing solutions for heavy cargo and machinery with overhead cranes and specialised MHE.

## SCOPE OF SERVICE:

# FIELD SERVICES

At **KLOSE**, we consider ourselves a partner of the machine builder. As such, we can assist with the market entry, sales, distribution, and import of your machines and spare parts into Asia. In addition, we can either fully or partially take over your regional field service and after-sales support operations. We see technical support as just as important as sales, and we understand that excellent service and customer support are what will competitively differentiate your company. With over 20 years of experience in the Asia-Pacific region and service locations and partners all over Southeast Asia, Taiwan, India, Bangladesh, Australia, and New Zealand, we have the local know-how and presence to elevate your service to the next level. In tandem with our German heritage and international corporate culture, we are fully capable of adapting and catering to our customers' needs and requirements.

## COMPLETE OUTSOURCING

As local competition rises, your after-sales service becomes an increasingly substantial differentiating factor for Asia-Pacific decision makers. Our customers benefit from our strong presence in the region, advanced technical know-how, and deep understanding of service as a Unique Selling Point. **KLOSE** is ready to handle full-scale outsourcing of all your field service activities in the APAC region.

## SALES & DISTRIBUTION

**KLOSE** is not for service contracts and spare parts alone. We also handle the sale and distribution of your machines and equipment as an appointed agent or distributor. Our experienced sales teams are well connected in the region and know the right decision makers. In addition, providing comprehensive technical services to relevant major players in the APAC region, we thoroughly understand their needs and requirements.

## INDUSTRY 4.0

Industry 4.0 is revolutionising how companies manufacture, improve, and distribute their products. Manufacturers are integrating new technologies, including Internet of Things (IoT), cloud computing, Artificial Intelligence (AI) and machine learning, into their production facilities and throughout their operations. **KLOSE** is ready for the future and has implemented automated and fully digital processes at the core of our services. Our project execution is paperless and, thanks to our modern software solutions, technicians can access IoT-enabled sensor data and rely on our AI-solution to analyse patterns and minimise downtime.

## OUR SCOPE IN DETAIL

- > Support with market entry or market development in APAC for the machine builder.
- > Developing service concepts, including suitable response times, service levels, contract templates, etc.
- > Service sales, including ad-hoc sales, spare parts, preventive maintenance & contract management.
- > Spare-part management, including warehousing, importation, (re)packaging, and inventory management.
- > Developing and optimising service blueprints, including adaptation to local requirements.
- > Frequent skill & knowledge training of service technicians (virtually/on-the-job/in manufacturing).
- > Final assembly, localisation, and back-end manufacturing of machines and other production equipment.
- > Mechanical, electrical, pneumatic, hydraulic, and further assembly of components.
- > Installation, commissioning, function testing, operator training, and more.
- > 24/7 breakdown support, including call centre operation.
- > Sales of machines & components as an agent or distributor in Asia-Pacific.
- > Detailed reporting and analysing of faults to drive constant improvement efforts.





## SCOPE OF SERVICE:

# PACKAGING

We understand that we are not just packing just a machine but a valuable asset. We adapt the packaging to your specific needs and requirements, whether your equipment is small or large, light or heavy, and is transported by sea, air, or road. We ensure proper and optimal protection of your goods throughout the logistics process for all modes of transport, even accounting for climatic and other logistical requirements. Moreover, in terms of technology, you've made the right choice with **KLOSE**. From hazardous and heavy goods packaging to secure air freight and spare & service part packaging, we deeply understand Industry 4.0 and look forward to pioneering the future of this space. In addition, thanks to our 3D design process, we can provide you with lifelike drawings of the actual packaging and work together to find your ideal solution. ESD-safe, vibration-dampening, anti-corrosion, heavy cargo, and dangerous goods are only a few of the aspects we manage daily.

## PACKAGING SERVICE

**KLOSE** offers a full range of on-site and off-site packaging services with decades of experience with oversized, extremely heavy, and fragile cargo such as high-tech machinery. Our dedicated teams can handle packing your cargo, container stuffing, flat rack lashing, and more, all with certified quality and transparent reports before handover for transportation.

## 3D DESIGN PROCESS

**KLOSE** possesses in-house capabilities to design and manufacture wooden packaging that meets and exceeds our customers' expectations. We employ advanced software solutions to provide lifelike 3D drawings of the packaging and load securing. Upon request, we can even incorporate the cargo. This significantly reduces the time required to identify the best possible solution.



## DID YOU KNOW?

Our Asia-Pacific headquarters in Kuala Lumpur, Malaysia, houses a state-of-the-art woodworking facility for manufacturing customised wooden transport- & export-packaging. Trained woodworkers equipped with the right equipment, such as automated panel saws, oversized table saws, and overhead cranes, can fabricate transport packaging of any size or form. You need an export crate for a 12-meter long and 35-ton heavy laminator? Your crate needs to withstand sea transport and tough weather conditions? You require someone to pack this machine at your facility? No worries, we have you covered!



## OUR SCOPE IN DETAIL

- > Fabricating wooden packaging for transportation via land, air, and sea.
- > Customised industrial packaging solutions, including ESD-safe, anti-vibration, anti-corrosion, and more.
- > Fumigation or heat treatment meeting relevant standards and regulations such as IPPC and ISPM15.
- > Facility disconnection, dismantling, move-out, and machine packaging preparation.
- > On-site or off-site packaging using specialised rigging and packaging equipment.
- > Vacuum packing, including humidity barrier and control devices; Shockwatch/Tiltwatch and more.
- > Arranging transport via land, air, and sea and custom transport solutions for oversized & heavy cargo.
- > Loading of oversized and heavy items on flat-rack or low-loader transport.
- > Lashing and issuing lashing certification as per international transport standards.
- > Container stuffing and load securing against shifting and moving during transport.
- > Contract-based, high-volume packaging of machines and finished goods.
- > Customised packaging solutions for sensitive equipment such as electrical components.

## SCOPE OF SERVICE:

# REMOTE FIELD TEAM

**KLOSE** supports manufacturing companies and the mechanical engineering sector with machinery installation projects as well as maintenance and other field service tasks without requiring machine specialists to travel on site. Our remote field workers, equipped with assisted-reality glasses, can transmit their field of view while your machine specialists accesses the live video feeds. He can be on-site virtually to guide, instruct, and monitor our teams from the comfort of his home or office on the other side of the world. All your technical experts requires, is a stable internet connection and a standard web browser or tablet and he can already join our employees on-site via a web application and participate in any job. Any data transferred is fully encrypted, and the highest safety standards are ensured.

## DIGITALLY-AIDED MAINTENANCE

Besides ad-hoc support, our RFT-solution is capable of assisting with repetitive maintenance tasks through pre-programmed workflows that guide the technician's maintenance activities step-by-step while documenting the process. This results in automated maintenance reports with pictures and videos for quality monitoring. Thanks to AI, our system can even identify errors during execution. But our RFT is not only suitable for maintenance – it can assist back-end and final assembly just as much as spare-part warehousing and order picking. RFT thereby significantly reduces training efforts and times, improves process stability, and makes quality control a breeze. For logistics, the AR headset is equipped with a barcode scanner and is fully integrated in our warehouse management software.

## ASSISTED REALITY

Assisted reality is 'reality first, digital second'. Deftly balancing both safety and productivity for the needs of the modern organisation as we realize Industry 4.0. It allows a person to view information without obstructing one's field of view, controlling what is seen with just the user's voice rather than hand gestures such as waving, pinching in the air, or using a tablet touchscreen (which requires removing PPE/work gloves). In fact, assisted reality eliminates the need for taking off your gloves to navigate via a touchscreen or making wild gestures, thus avoiding potential health and safety risks.



## RUGGED AR HEADSET

### 100% HANDS FREE

Voice based operating system

### PPE COMPATIBLE

Compatible with standard PPE used in construction

### WATER RESISTANT

Protected against heavy rain and direct water

### DUSTPROOF

IP66 certified. No ingress of dust particles



### NOISE CANCELLATION

Performs up to 120dB with 4 microphones

### DROP RESISTANT

2 meter onto concrete from any angle

### FULL-SHIFT BATTERY

Hot-swappable, 8-hour battery life

### CERTIFIED RUGGED

MIL-STD-810G certified. Works from -20 to +50°C.





## SCOPE OF SERVICE:

# CLEANROOM

Working inside a cleanroom places the highest requirements on both staff and the equipment used. This becomes obvious when machines weighing in excess of 20 tons that operate with the precision of mere nanometers have to be relocated without affecting other on-site production. Additionally, depending on the cleanroom classification, strict regulations regarding airborne particles have to be observed. With over 10 years of experience, **KLOSE** is your ideal partner. We handle everything from planning to move-in, assembly, and commissioning for all your machines and systems, such as steppers, implanters, stockers, trackers, etchers, platers, polishers, and sinkers in clean- and ultra-cleanroom environments. With proven protocols, our experienced technicians know how to ensure minimal disruption and avoid contamination.

## SPECIAL EQUIPMENT

Thanks to our specialised equipment, **KLOSE** can guarantee the contamination-free, temperature-controlled, and vibration-free transport of your sensitive machinery. Our airpad system and aluminium lifting frames allow for precise equipment positioning, and our high degree of digitalisation and deep understanding of Industry 4.0 ensures a complete and spotless documentation.

## HOOK-UP & FACILITY

Since 2008 and with our partners, we have been involved in engineering, manufacturing, and executing piping and hook-up for facility-related connections in high-tech environments for technical and biological clean- and ultra-cleanrooms. Our customers range from semiconductor and electronics manufacturers to pharmaceutical and medical companies.



## DID YOU KNOW?

Today's trends of automation, digitalisation, and networking are accelerating technological innovation. More and more high-tech products are manufactured in highly sensitive environments that are classified as cleanrooms. Being a highly dynamic market, manufacturer requirements change frequently. Our service concept for cleanrooms bundles all our specialist knowledge regarding the move-in, positioning, hook-up, assembly, and maintenance of highly sensitive machines operating in such demanding environments.



## OUR SCOPE IN DETAIL

- > Project planning, including simulation of transport path and methodology as well as milestone definition.
- > Erecting temporary storage and transition spaces with controlled environmental conditions.
- > Unloading and unboxing of arriving equipment and thorough delivery inspection.
- > Acclimatisation and wipe-down using pre-defined methodology.
- > Monitoring and measuring of surface and core temperature as required.
- > Mechanical, electrical, pneumatic, and hydraulic assembly of components and subsystems.
- > Move-in using specialised equipment for cleanroom such as zinc-plated/stainless steel robot skates.
- > Positioning as per provided layout. We can also execute floor marking, elevation benchmarking, and more.
- > Facility hook-up and last-mile connection as per engineering drawings.
- > Involving machinery OEM or customer specialists using Remote Field Team virtually.
- > Power on and startup testing, including basic I/O.
- > (Preventive) Maintenance and 24/7 breakdown support as well as scheduled cleaning services.



## SCOPE OF SERVICE:

# MAINTENANCE

As a specialist in technical maintenance, **KLOSE** ensures continuous modernisation and smooth production. As plant efficiency is the benchmark for high added value, all disruptions in the production process must be ruled out. Our service package is based on integrated maintenance concepts that follow applicable DIN standards with all-encompassing process optimisation, from machine functionality and technical improvement to the qualification of your operators. We believe in needs-based inspection, maintenance, and repair services. Accordingly, our trained technicians take measurements, put the machine through its paces, and provide a full diagnosis. Based on this, we develop machine-specific maintenance concepts that include fluid management, preservation, and mechanical readjustment. The replacement of parts and assemblies, retrofits, and other repair services are also discussed and planned.

## MANPOWER SUPPLY

Whenever your in-house maintenance team requires a helping hand, such as during large turnarounds or other scheduled & non-scheduled maintenance events, we can assist with qualified and trained technicians to either manage peak demand or provide skills that your team might lack. With a broad range of skilled technicians readily available, **KLOSE** is your reliable partner in the region.

## EQUIPMENT SUPPLY

Most of our specialised equipment is available for short-term rental to support out-of-the-ordinary maintenance tasks. With our unique fleet of electric counterbalance forklifts in APAC, rated up to 10.5 tons capacity, specialised lifting & moving equipment such as hydraulic gantries, and tools for maintenance & repair services, we can cater to your most nuanced requirements.

## MAINTENANCE OUTSOURCING

If you are looking to outsource either the maintenance of your entire plant or an individual type of machine, **KLOSE** is there to help and take this burden from you. From assessment of the status quo to developing an all-encompassing maintenance concept. Providing consulting on stock levels for critical spare parts, maintenance frequency, and fluid management is only one aspect of our service. The integration and retrofitting of Internet-of-Things („IoT“) sensors and AI solutions for the analysis and prediction of downtimes are also part of our service concept.. We can offer you a complete solution and take care of all aspects of the technical maintenance of your systems and machines.



## OUR SCOPE IN DETAIL

- > Consulting services regarding technical maintenance, continuous modernisation, and uptime increase.
- > Detailed assessment of current state of a single machine or the entire plant, including full diagnosis.
- > Reporting on status quo and developing action templates to improve technical maintenance.
- > Development of machine-specific maintenance concepts, including fluid management & preservation.
- > Technical execution of (preventive) maintenance tasks by qualified and trained KLOSE technicians.
- > Replacement of parts and sub-assemblies, retrofits, and other repairs or upgrades.
- > Scheduled check of electrical safety and maintenance of safety devices.
- > Digitalisation of entire maintenance from planning to execution and stock levels.
- > Implementation of IoT in the form of sensors and trackers to automatically report machine performance.
- > Supply of additional manpower and equipment as required on an ad-hoc basis.
- > Definition of critical spare parts and stockpiling of the same at adequate levels.
- > Training of operators, maintenance technicians and other stakeholders to ensure smooth production.





## SCOPE OF SERVICE:

# ESCALATOR & ELEVATOR

Our customers are in the service of people every day and help to make the lives of millions of people a little easier. They manufacture and maintain escalators and elevators, or plan public buildings. These complex and often unwieldy systems usually have to be moved-in and installed at very tight and hard-to-reach spaces, further increasing the challenge of the task and introducing potential points of failure. Furthermore, this often needs to happen during operating hours and in high-class environments. Good advice is expensive in such cases, or it comes from **KLOSE**. We serve the industry everywhere, whether in department stores, train stations, airports, hardware stores, or wholesale markets. We handle importing, storing, transport to site and move-in, as well as installation. We are also frequently involved in exchanging an existing escalator or elevator at the end of its lifecycle.

## ON-SITE LOGISTICS

We provide dedicated and trained teams that handle unloading at site, detailed delivery checks and reporting, cross-transport and move-in to the installation location. Additionally, they perform sequencing of materials, parts, and systems by floor and lend a helping hand to installers and fitters. Thus streamlining site execution and maximising efficiency and quality.

## INSTALLATION SUPPORT

Upon request, **KLOSE** can provide certified and trained technicians to assist with the installation of escalator and elevator systems. If desired, they can handle an installation independently or jointly with the customer's lead technician. We frequently send our technicians for relevant training and certification to ensure they are always up to date with the latest models and methods.

## CONSTRUCTION DELIVERY

Delivering to construction sites pose challenges for any logistics provider and freight forwarder. Unknown conditions at the delivery site, difficult-to-access transport paths, or unsuitable and missing equipment for unloading. And on top, it starts raining. Delays, damages, and even loss of material is practically preprogrammed. But this is not the case with **KLOSE**. Special heavy-duty trucks equipped with offroad-ready, carry-on, and remote controlled forklifts that work day and night, rain or shine, make construction deliveries a breeze. Thanks to the integrated logistic concepts of **KLOSE**, deliveries are done on time while eliminating material losses.



## OUR SCOPE IN DETAIL

- > Construction delivery with specialised trucks equipped with carry-on forklifts.
- > Warehousing escalators, elevators, and their related parts in tailored warehouses with overhead cranes.
- > Inspection of incoming equipment from overseas manufacturing sites for completeness & defects.
- > Inventory management, order-picking, and sequencing for Just-In-Time & Just-In-Sequence delivery.
- > Unloading on-site with digital proof of delivery and a digital delivery checklist to ensure completeness.
- > Transfer to storage location on-site and uncrating and sequencing per floor and install location.
- > Internal cross-transfer and lifting to move items to the final location.
- > Lifting, rigging, and moving of escalators using Pick & Carry Cranes, A-Frames, and other methods.
- > Alignment and levelling of escalators and handover to installation teams.
- > Support with escalator & elevator installation and assembly.
- > Rental of special equipment and consulting on the best rigging methods for given location.
- > Provision of qualified and certified manpower to assist OEM with related works.

# CORE VALUES

Our vision is to further advance our positioning as the market leader for all-encompassing industrial services, relying only on our internal resources. From consulting and engineering to execution and analysis. Our aim is to relieve our customers of all matters relating to the machine life-cycle, including the sale of machines and spare parts as well as the continuous improvement of the performance and efficiency of the systems under our purview. Combined with modern technologies such as augmented reality, the consistent implementation of Industry 4.0 and the increase in transparency through automatic reporting, **KLOSE** will be the Best provider of industrial services on the market.



## QUALITY

Quality is measurable, and perfection is the essence of the **KLOSE** Group's processes. Whether attached to accident statistics or the perceived quality we deliver to our customers. The consistent improvement in all aspects and throughout all our processes is the daily goal of our teams.



## SAFETY

Environmental and Occupational safety are organised systematically at **KLOSE**. With regular training & process compliance checks, we ensure our outstanding quality and the safety of anyone involved. Hazard analysis & safety concepts are standard procedures for us.



## SUSTAINABILITY

At **KLOSE** Group, we think forward: A sustainable and environmentally conscious investment policy is the cornerstone of our actions. We do everything to meet the most developed eco-standards. We are committed to using a significant share of our turnover for environmental protection projects.



## EFFICIENCY

We are ahead of the curve through our full implementation of digitalisation and the use of specialised equipment. At **KLOSE**, we are committed to staying within defined budgets. Our lump-sum prices are to be understood as such, and there are no hidden fees or costs like with some of our competitors.

*„Customer satisfaction is our highest goal.“*

- Hans-Martin Klose  
(Managing Partner)



## LISTENING TO FEEDBACK

We carefully listen to and value the feedback given by our customers.



## CONTINUOUS IMPROVEMENT

Any chance to improve ourselves and our services will be utilised.



## INTEGRITY & ETHICS

We uphold the highest workethics and are 100% compliant with the law.



## PROACTIVE & INNOVATIVE

Providing creative and innovative solutions is our forte.



# #MOVED

by **KLOSE** blog

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