GENKINGER
MATERIAL HANDLING

Genkinger - Special electric industrial warehouse trucks

Examples of applications and solutions





PLANT CONSTRUCTION | AUTOMATION | AUTOMOTIVE | CONSTRUCTION MATERIALS | ENERGY

For further information on individual contributions, please feel free to use the QR codes.

Impressum

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SECTORS

Our creative ideas are already helping to change the intralogistics processes of the future

Richard Ludwig

Dear customers,
dear interested parties,
My team and I are pleased to present you with around 60 project examples from a wide range of industries. They show a cross-section of successfully implemented Genkinger solutions worldwide and reflect for you, I hope, our innovative spirit and know-how.

We have understood that many companies increasingly seek customized solutions, and we offer tailored options for this purpose. You are also welcome to be inspired by projects in sectors other than your own. Looking „beyond the box“ often brings good ideas and visions. As one of the world‘s leading manufacturers of equipment for internal transport, we are constantly facing up to the differentiated technical tasks of our customers. And we have been doing so for over 100 years. That is why I can promise you: Our products are durable and future-oriented, improve logistical processes enormously, increase occupational safety, counteract the shortage of skilled workers and much more. In short: We help you to find exactly your solution in these challenging times characterised by transformations and innovation offers.

With kind regards

Managing Director Genkinger GmbH

multidirectional forklift

Damage-free remote controlled via radio

At the world market leader for plants in the beverage industry, one single employee operates packaging lines quickly and efficiently with a stacker from Genkinger. The multi-way stacker lifts components weighing up to 1,500 kg. Depending on the load and the goods to be transported, the vehicle is equipped with different pick-up devices, including clamps and rotating devices. Especially with bulky and heavy components, the operator always has the best view of the load and travel path via radio remote control and controls without causing damage.

Platform with lift

Transport of sea containers

A Genkinger multidirectional platform with lift transports standard sea containers. Mobile equipment for worldwide use is installed in these containers. The containers are transported from production while still empty and then filled for shipping. The platform truck drives underneath a container in lowered position and lifts it up ready to be moved for transport. Despite spacious areas at the customer´s factory, there is a lack of space due to the good order situation. Therefore, mobility of the transporter is particularly important. Various steering programmes, such as transverse, diagonal and circular travel, facilitate manoeuvring in conjunction with a radio remote control.

Automated Guided Vehicle

Foil packaging fully automated

An internationally active foil manufacturer and coater confronted Genkinger with a complex task: automatic take-up of foil reels at winding/ cutting systems and delivery of the finished reels to a rotary changer for fully automatic packaging -24/7. Tight space conditions and constant passenger traffic had to be taken into account. The solution was provided by the AGV G-ROB, which, with the help of a 360° navigation laser and a floor rail, precisely positions (+/- 2 mm) the rolls at each wrapping/cutting unit, removes them with the help of two mandrels (load capacity 600 kg each) and transfers them to the turntable. Personal protection scanners secure the area around the vehicle. Controlled by the ERP system, the G-ROB processes the orders fully automatically.

Tool change truck

15 to tools
from hall to hall

Negative acceleration is often underestimated. In the project shown here, however, it was taken into account in an exemplary manner. An automotive supplier needed more storage space for an increasing number of injection moulds. There was no other option than to relocate the tools, which weigh up to 15 tonnes, to another hall.

This is now handled by a Genkinger heavy-duty pallet truck, which has a load capacity of up to 18 tonnes. Genkinger also developed the associated heavy-duty pallets for the automotive supplier.

This resulted in an additional task for the design of the lift truck: in order to reach the new storage area, an enormous incline has to be covered. The lift truck was therefore equipped with two hightorque drives.

It is not only important that the tool loads weighing tonnes are moved quickly and safely. Rather, the lift truck must also be able to control the dynamic forces so that it can be brought to a safe stop even from full speed (keyword: negative acceleration). This was tested in particular during downhill travel, where the track has a steep gradient.

Pedestrian vehicle

Compact for heavy injection moulding tools

Our customer needed an industrial truck to transport Euro pallets and injection moulds weighing up to 5,000 kg. As a solution, we developed a pedestrian truck with reversing forks and a push-on load beam equipped with a crane hook.

The 2,020 mm front end dimension was extremely compact for a 5-tonne truck. Due to the radio remote control and the absence of a tiller the machine was dedicated exactly to the needs of our customer from the automotive sector - and less costly.

Tool change truck

External guidance no longer necessary

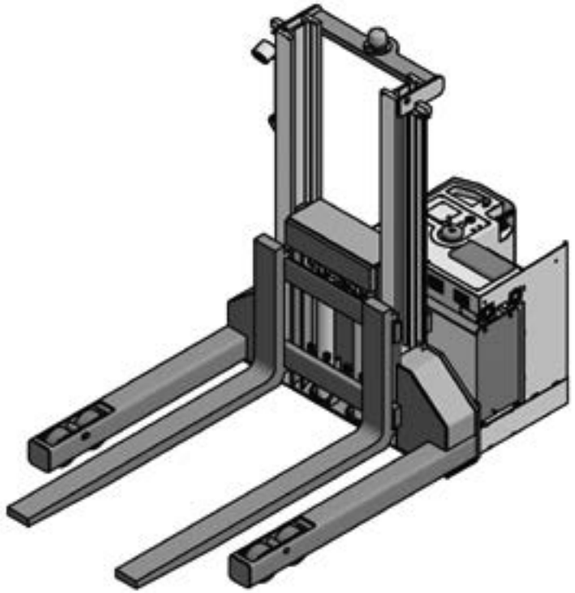
The routes at an automotive supplier between injection moulding machines, the mould warehouse and the repair department are long and often very narrow. Tools have to be transported between the individual stations several times a day. The Genkinger tool transporter replaced a tractor with trailer that was very difficult to manoeuvre. The new vehicle, on the other hand, has intuitive operation, a low centre of gravity and easy load securing. In addition, a radio remote control makes life even easier for the operator of the platform trailer. When driving through gates, a second person is no longer necessary to guide the vehicle and it can be positioned precisely. The transporter can move weights of up to 10 tonnes.

AUTOMOTIVE

Driver‘s platform device

From the storage area to the presses

A Genkinger driver‘s platform device brings pressing tools weighing 10,000 kg from the storage area to the presses. We developed this device for an automobile manufacturer. The challenge was to achieve a load capacity of 10,000 kg with a load centre distance of 1,400 mm. In this solution, realized with a stand-on platform, the operator is sheltered within the machine contour. The entry height of 365 mm allows easy access. The unit is equipped with a flashing beacon, working lights and Blue Spot.



Manual devices

Low-fatigue design

An automotive supplier in Slovakia has been using manual Genkinger units in its factory for years to transport car front segments. The devices pick up the finished goods at the end of the manufacturing process and place them in transport racks. Afterwards, the goods leave the production plant „just in time“ to the nearby car plants. The payload is 100 kg, the lift is electric. Various limit switches help to position the sensitive load. Low-fatigue operation is ensured by the weightsaving design.

High-lift trucks

Lift mast longitudinal to the direction of travel

The space-saving storage of tools was the task for this project. By rotating the lift mast lengthwise to the direction of travel in conjunction with a hydraulic fork extension, the 90° turn during load pick-up can be dispensed with. The required manoeuvring area of the vehicle was thus reduced to the maximum. The aisles between the rows of racks could be minimised accordingly and the number of stored tools could be increased on the available space.

Tool change truck

Increased safety requirements

A manufacturer of radiators for the automotive industry had a requirement to safely transport and change tall, narrow tools. The previous system with a forklift attachment no longer met his increased safety requirements. The solution here was a compact, manoeuvrable tool changer with a push-pull mechanism for the tool. Lashing straps secure the load even in unforeseen situations, e.g. emergency braking.

A radio remote control is also a prerequisite for operation by a single person in this application. Another person for navigation is not required. The total weight and dimensions of the coupler had to be kept as small as possible in order to be able to reach the tool store with the existing lift.

Tool change truck

Interaction
during tool change

An automotive supplier planned a process change in tool changing: A large tool weighing 18 t and 3.70 m long was to be moved from a platform truck to a tool table at a changing station. A smaller 3 t tool changer was to be able to change modules from the large tool separately. All this was implemented in a confined space in a special area of the production. The tool changer moves to the tooltable to precisely pick up or insert the tools with special rams. Since both devices and the table were planned together from the outset, the processes run exactly as the customer wanted.

Platform truck

Coil handling
in variable trough

A premium car manufacturer enquired about the replacement of a platform car. The challenge was to develop a coil transporter with a trough that could safely transport coils weighing 10 to 30 tonnes. This type of design was necessary to control the centrifugal forces. In addition, this trough is hydraulically adjustable for different coil diameters of up to 1.90 m. A deflector lever is used as a tilt lever. A deflection lever is installed to prevent tipping. In a large delivery hall, the coils are unloaded directly from the truck by crane. After the transfer, the Genkinger industrial truck starts the journey to the press. The platform truck is designed for 24/7 use and has now run for around 8,000 operating hours - always trouble-free.

Coil Handling

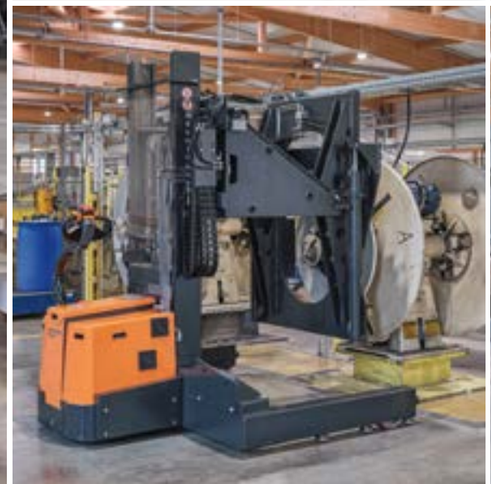
Crane and C-hook were replaced

Until now, the coil handling process was complicated, expensive and not without danger: the coils of a manufacturer of ceiling systems were placed on a tilt table with a forklift and from there onto the reel by crane and C-hook. Now two special Genkinger transporters pick up the lying coils (eye to the sky), place them vertically (eye to the side) and put them on the reel.

Advantages are:

- Saving crane runways in new construction
- Crane-free storage outside the building
- Strong reduction of damage
- More flexible system due to two redundant vehicles for all tasks

Another useful feature is an adapter for smaller coils.



Reach truck

Unique: Double operator control

This compact reach truck enables DIY stores to reduce aisle width by 40 cm. The centimetres saved mean additional shelf space and thus more turnover by more goods.

A specially developed dual operator control system is what gives this truck its character. Only this makes manoeuvring in the narrow space possible in all directions. For handling Euro pallets, the operator can choose to stand crosswise or lengthwise. This means that he always has the best possible view of the loads.

High-lift truck

Manoeuvrable device in a mobile shelf

Many different injection moulding tools of a window manufacturer are stored in a confined space near the marshalling areas or the processing machines on eight mobile racking levels with a total height of 5,5 m. This allows as many tools as possible to be accommodated. In addition, the company needed a manoeuvrable and robust high-Lift truck for order picking. With guide rollers, the lift truck moves exactly in contact with the shelf and stores or retrieves injection moulds weighing up to 1,800 kg using a pantograph. Even after many years, the device runs trouble-free.

High-lift truck

Grab for 200 kg heavy concrete gutters

Picking heavy parts often means compromising on ergonomics, safety and speed. But not at a building materials company that picks concrete gutters to order on Euro pallets. A special high-lift truck provided the desired fast, safe and ergonomically high-quality solution. The essential feature of this application is a four-axis gripper arm with a radius of 2,400 mm. The operator guides it to the troughs weighing up to 200 kg, clamps them at the push of a button and lifts them without muscle power.

High-lift truck

More speed for slab formwork

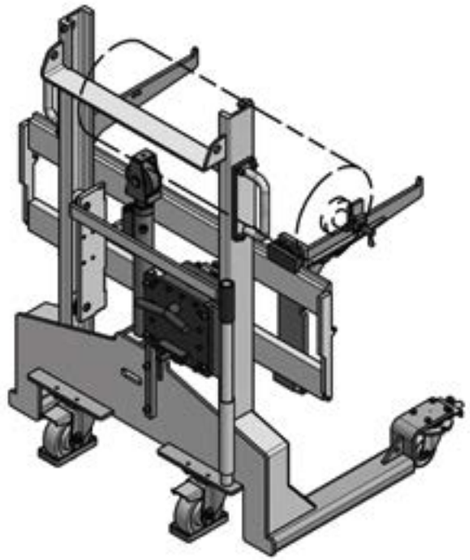
For a leading formwork and scaffolding manufacturer from Austria, Genkinger developed a special machine for use on construction sites. It is rented by construction companies together with slab formwork. The Genkinger machine lifts the goods weighing around 1.4 tons to a height of up to 4 metres. This means that it performs tasks that previously required seven to eight people. Today, one person with one machine is enough. The Genkinger machine has a specially designed receptacle for the formwork. The drive unit and the fourway chassis is designed from Genkinger´s modular standard kits. The machine drives on sweep-clean concrete floors and has proven itself on construction sites.

High-lift truck, Roll handling

Very narrow manipulator for printing cylinders

Due to limited space, we developed a solution for a print shop with a lost load dimension of only 310 mm. In the print shop, the Genkinger high-lift truck is used to change and transport printing cylinders.

We pulled out all the stops for an extremely compact solution: the four swivel castors are located under the lift mast and the hydraulic pump is placed between the mast profiles. The swivel castors ensure free positioning of the printing rollers. For defined longitudinal or transverse travel in the narrow aisle, the load rollers are equipped with brakes. The support arms can be adjusted manually, as well as a latch for reliable load securing.



Special device, Roll handling

Turning trolley
for photo paper rolls

Paper rolls with coated photo paper cannot simply be picked up with a clamp. Otherwise the sensitive outer layers of the paper roll would be damaged. For such cases, Genkinger has a reel turning trolley in its portfolio. The paper roll is taken off a winder, carefully turned upside down and then placed on a shipping pallet. All hydraulic functions are sensitively controlled.

Low-lift truck, Heavy load vehicle

Maximum power
in extreme heat

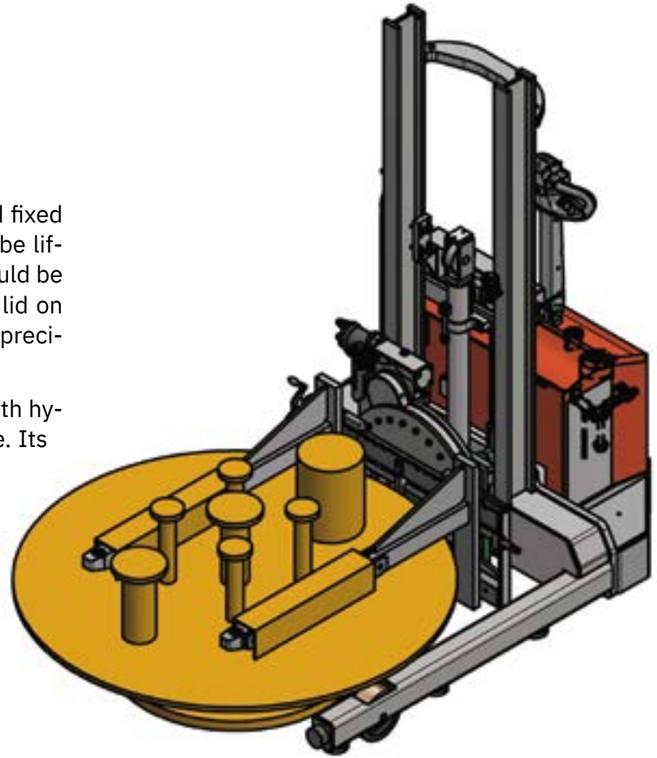
50 degrees Celsius and up to 90 percent humidity mean an extreme challenge for two cable reel transporters in the United Arab Emirates. Both machines are equipped with temperature management, powerful fans, dust filters and generous reservoirs - for maximum performance. The Genkinger heavy-duty low-lift trucks transport 15-tonne and 25-tonne cable drums from production to the test centre and from there to shipping. By switching from counterbalance trucks to pallet trucks, the customer saves space because no counterweight is needed. He also benefits from lower acquisition and operating costs.

High-lift truck, Special device

Positioning with millimetre precision

The lid of a reactor was to be clamped and fixed for internal transport. In addition, it had to be lifted and rotated by 180 degrees so that it could be cleaned. The challenge was to position the lid on the reactor‘s hole pattern with millimetre precision after cleaning.

The solution is a Genkinger high-lift truck with hydraulic turning device and FEM fork carriage. Its forks are manually adjustable. Balls have been embedded in the forks, which allows the lid to be positioned „floating“ in the x-, y- and z-axes.



Low-lift truck

More space for the production

A manufacturer of large transformers had the goal of eliminating a large forklift truck from its production. The solution is a Genkinger low-lift truck with a load capacity of 20 tonnes. Unlike the large forklift, the pallet truck does not need a counterweight and has a quiet, emission-free drive. The space saved is now used to provide more production area for the increased demand.

To keep an overview in tight situations, the lift truck was equipped with a radio remote control. A second person is no longer required for manoeuvering. The low entry height also allows the use of heavy-duty pallets on which the load is temporarily stored before dispatch.

Low-lift truck

Heavy metal sheets

for Windmast segments

The 15 t low-lift truck from Genkinger transports mast segments for wind turbines. A crane was out of the question because the heavy metal sheets are bent in one bay and welded in another. The low-lift truck was adapted exactly to the operating environment and the customer‘s needs.

An adapter for small mast segments can be easily accommodated, with simultaneous adjustment of the arms width. Laser distance sensors in the tips of the prism arms provide additional safety. For longer distances, the driver stands on a platform. When the side bars are folded out, the low-lift truck travels faster.

Long-goods transporter

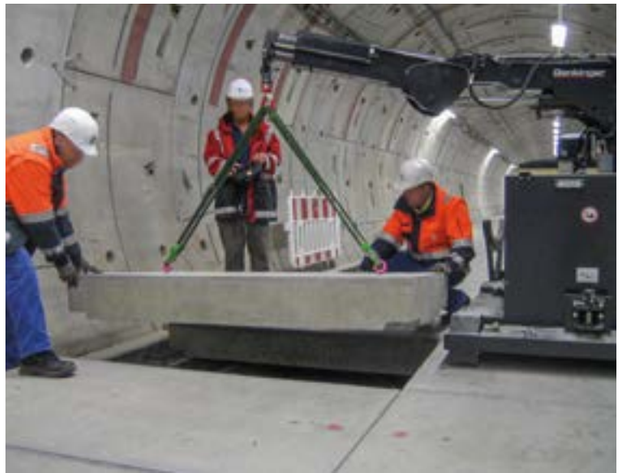
Recording with special clamp

A manufacturer of glass cylinders relies on three identical units from Genkinger to transport its sensitive glass loads. During their manufacturing process up to final inspection and shipment, the glass cylinders go through a variety of procedures and tests. Initially, the cylinders are very hot and cannot be transported. In the further process they cool down and are then carefully picked up with a clamp. The glass load is almost 4 m long, has a diameter of up to 500 mm and weighs up to 300 kg.

Platform truck, Crane truck

Compact devices for tunnel laser

A super X-ray laser accelerates electrons to almost the speed of light in kilometre-long underground tunnel tubes. Since the beginning of construction, the high-tech company has relied on industrial trucks from Genkinger. They have to be built very compact because of the tight spaces, e.g. a crane vehicle that is lowered into the tunnel by lift and lays 1.5 tonne floor slabs there. Or a multi-way platform truck equipped with a lift-push-turn unit for installing concrete slabs as radiation protection or for special magnets.



Special device for clean rooms

Transport of silicon rods

A high-tech company asked Genkinger for a solution of a difficult task. His vision consisted of a special industrial truck that is used in clean rooms. The Genkinger device is not only a transport device, but part of the production process. It takes sensitive silicon rods from a drawing plant and transports them by radio remote control to another hall to the next production step. Since the vehicle had to meet strict conditions, no hydraulics were allowed and it had to be made entirely of stainless steel; it was not allowed to be magnetic.

Tool changing truck

Sealing ring transport through small gates

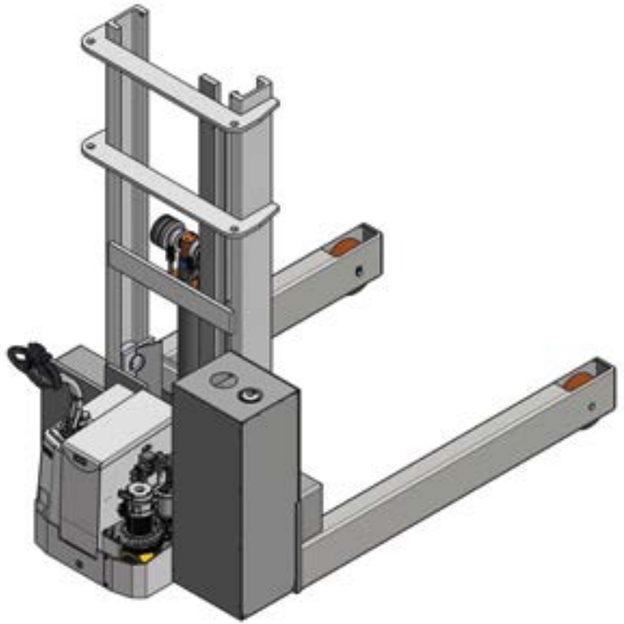
An industrial company from northern Germany changes large ring tools to produce sealing rings. The Genkinger machine has a number of clever small details, but the biggest challenge was to be able to cope with the low floor load compared to the total weight of the vehicle. Furthermore, tight space conditions had to be taken into account in order to move the large rings safely and efficiently. A crank clamps the ring tool onto the platform, which has three defined positions:

- Almost vertical for loading vertically suspended tools by crane
- diagonally tilted to minimize the width of the vehicle for gateways
- horizontal for transfer to the machine

Special unit

Transport to the assembly and final inspection line

We developed a special device for internal transport for a machine manufacturer. He manufactures soil cultivation machines for agriculture. The weights are up to 5,000 kg with a load centre of 2,000 mm, the (foldable) width is up to 16 m. The Genkinger equipment transports the machines to the assembly workplaces and to the final inspection. The load handling device for docking the machines, adapted to an FEM fork carriage, was created by the customer. For the safety of the assemblers, the Genkinger machine was equipped with a mechanical lowering lock. This means that work can also be carried out on or under the picked-up load.



Tractor

Four load supports for agricultural machinery

An agricultural machinery manufacturer needed a tractor to transport its loaders, harvesters and balers. The machine was to cover as many transport functions as possible for the agricultural machines weighing up to 15 tonnes. For this purpose, four load couplings on the tractor were designed differently for the respective towing jaws. After the agricultural machines have passed the final acceptance tests, they are driven by the tractor with a gradient of 2% over 80 m to the parking area outside.

High-lift truck

More space, less Service effort

Thousands of engines weighing up to 1,600 kg of a leading international manufacturer of construction machinery are transported annually from the plate conveyor to the assembly place and from there to the lifting and lowering system of the paint shop. The customized Genkinger high-lift truck replaced a large standard forklift. The result was more space and safety as well as less service effort. With 1,000 mm width x 1,800 mm length x up to 3,000 mm height when the mast is extended, the necessary compactness was achieved. With 600 mm distance to the front the crane hook crossbeam is very small.

Mobile assembly unit

Accelerated assembly process

A paradigm change is taking place in the assembly department of a leading crane manufacturer and machine builder. Part of the changeover process is a special device from Genkinger for assembly and testing work at crane segments. In order to be able to position those precisely, the mobile assembly unit has six hydraulic functions. The unit partly replaces the previously used roof cranes and represents a significant process optimization. Combined, the seven telescopic thrusts with a maximum length of 14 m result in crane jibs up to 90 m extended length. This means that the cranes can handle loads from 70 to 250 tonnes.

Drawbar and driver seat unit

Wheel assembly in XXL format

Wheel assembly for up to nine-axle vehicles of a world-leading crane manufacturer runs quickly and safely with wheel manipulators, tiller-guided or as a driver seated version:

- The manipulator clamps the horizontal wheels individually, swivels them vertically into the assembly position and transports them to the crane.
- By means of radio remote control, the operator steers a tyre in front of the axle. He quickly finds the perfect viewing angle and, with the help of the radio remote control, accurately places the wheel from a safe distance using the turning device, sideshift and tilt functions.

Tow Tractor

Pick-up
with gooseneck

It‘s a tight situation in front of the painting facilities of a large construction machinery and crawler crane manufacturer. New components arrive regularly on rolling pallets that have to be stored temporarily. In order to expand the storage area, marshalling areas were reduced. A much larger vehicle was replaced by a narrow, radio-controlled tow tractor from Genkinger. It is only 1,600 mm long, moves loads weighing up to 17 tonnes and is firmly connected to the rolling pallet by a gooseneck pick-up arm.

High-lift truck

Configuration for
tube rotation

If loads should not or cannot be transported on Euro pallets, a Genkinger high lift truck from the modular system is usually required. This is true in many areas of production logistics. A construction machinery manufacturer had to turn cylindrical tubes by 180 degrees for two-stage machining. For this purpose, the high lift truck received a roll clamping attachment for exactly the relevant roll dimensions. Likewise, all components such as the lift mast, drives, wheels and rollers were selected with a coherent overall configuration in mind. This is the only way to ensure maximum performance and safety.

Order picking solution

Order picking of ropes with two machines

Genkinger developed a tandem for a manufacturer of steel ropes, e.g. for lifts and cranes. The vehicles are used individually for transporting the rope drums and together for picking ropes. The first vehicle picks up a full rope drum and is placed opposite the other vehicle, loaded with an empty drum. Then the rewinding from the full drum to the empty one takes place. Long distances to a stationary system are eliminated.

Coil Handling

40,000 kg of steel have to be packed

The coils of a steel producer have to be lifted free from the ground, packed and set down again. They weigh up to 40,000 kg, have diameters of 800 mm to 2,100 mm and widths of 300 mm to 1,700 mm. Due to the load centre, this corresponds to the equivalent of a 60-ton truck. With this, Genkinger stepped up into highest load regions a few years ago.

The load mandrel is equipped with a protective or wear lining made of polyethylene. It is driven by 2 x 5.0 kW/48 volt three-phase drives, whereby the unit does not have to be moved once the load has been picked up. The unit is operated from a safe distance by radio remote control.

Coil Handling, Reach truck

10 to coils
in 6 m lifting height

With new heavy-duty racking, a new structure arose in the warehouse of a metal goods dealer - and at the same time the demand for a compact heavy-duty reach truck. It had to be able to move aluminium coils of 10 tonnes with a load centre of 1,100 mm to a lifting height of 6 metres. During the first contact, the customer asked whether such a device could be realized at all and whether Genkinger had a reference project. This did not exist, but there was no „can't" either. So Genkinger designed an innovative machine for the downsized operations where no standard forklift would have fit. The Genkinger heavy-duty reach truck is one of the largest of its kind in the world -and yet compact.

Coil Handling

Genkinger device
as a game changer

A storage technology company recorded (too) many damages to windings of coils used for the production of industrial shelving and container systems. Quite often a complete winding of the coils had to be thrown away. A Genkinger device was then the game changer.

Now the coils are moved by only one person instead of three or four as before. The diameter and weight of the coils are up to 1.90 m and up to 8 tonnes respectively.

The coils are picked up directly with a mandrel and transported to the reel or to the storage areas. The time-consuming intermediate step via a coil chair is no longer necessary. The dimensions of the Genkinger unit are two thirds smaller than those of a front stacker. This results in considerable space and safety gain. The shortening of the process and the savings through the avoidance of damage enabled the warehouse technology company to amortise the device quickly.

High lift truck

Stress level drastically reduced

This electric pedestrian pallet truck with prism forks brings advantages in coil handling. It transports large, heavy coils up to 3.5 tonnes and can also safely hold 19 mm narrow coils. They are secured by a prism stabilizer and transferred to the processing machine.

A remote control keeps the workers far away from the danger zone, even if a coil should slip off. The safety gain has significantly reduced the stress level for the employees

Sheet metal transporter

Sheet metal packages positioned simply

The sheet transporter is a preferred option when sheet packages need to be transported efficiently, especially when no crane is available to feed the laser cutting systems. The transporter is then loaded by a pallet truck or forklift.

At the laser, the transporter is parked directly under the vacuum grippers, which remove the required amount of sheet metal. This vehicle is designed for large sheets of 3,000 mm x 1,500 mm and moves up to 3 tonnes. The lateral sliding surfaces ensure easy positioning at the laser.

Charging trolley, Platform

Ergonomic optimisation

The well-being of its employees is particularly close to the heart of a gear and transmission manufacturer. Since almost every component is surface-treated, it must be carefully placed in batch racks. To make this process more ergonomic, the company found a charging trolley solution together with Genkinger. It enables the employees to obtain a comfortable working position during the loading process, for example by

- lifting height control by means of foot pedal for easy adjustment of the working height
- rotatable batch platform to avoid overreach to the other side
- sensitive drive for easy manoeuvring and approach to the transfer point

Charging trolley

5,000 kg distributed over three forks

In daily hardening shift operation, the charging trolley transports heavy components to two furnaces. The maximum weight of the batches is 5,000 kg, distributed over three forks of 2,200 mm length. Not only the load is very sensitive, but also the inside of the ovens into which the batches are driven. Guide rollers on the vehicle and a stop ensure the correct position. A lowering lock prevents the lower part of the oven from being damaged, even if the hydraulics fail.

High lift truck, four-way

Supply
of automatic lathes

A hydraulics manufacturer in southern Germany received a tried and tested four-way high lift truck from our modular system. This compact device moves long goods such as bars, profiles and pipes in various production phases in a very confined space. After supplying automatic lathes with raw material, the high-lift truck transports the shortened parts to the next processing stage by means of a pallet. The compactness of this Genkinger industrial truck is due to its design, as no counterweight is required.

High lift truck, four-way

Bundles of bars directly
to the sawing machine

Until now, a metal processor and contract manufacturer picked the iron bars for production individually by hand from the shelves. This process had to be changed due to the order situation, a faster one was needed and the space in the company had to be used better. In the meantime, there is a more efficient solution that is easier on the workers‘ bodies: the machine moves to the side of the shelves, picks complete bundles of bars and brings them directly to the saw. The space in front of the saw is set up in such a way that the forklift can place itself exactly on the right spot. A larger standard stacker would have taken up more space.

Bar manipulator

Narrow device for automatic lathes

For efficient and uninterrupted production, automatic lathes are often equipped with feeding magazines for the raw material bars. To save space, the lathes are usually arranged very close to each other. This arrangement makes the supply of raw material more difficult, especially if it is decided late in the planning process. For the narrow aisles in front of automatic lathes, the narrowly designed Genkinger bar manipulator has been proven as to be the ideal vehicle.

Advantages for the users are:

- Narrow design with little space
- Usage in several buildings
- No work under suspended load
- Transport from the warehouse to the lathe with a vehicle

Tool changing trolley

Special efficiency through interaction

At a manufacturer of stamped parts, the customers‘ orders changed - smaller call-off quantities in connection with more products. Therefore, the set-up times of the stamping machines had to be reduced. In addition to the existing Genkinger tool changing truck, a second 16-ton multiway tool changer was purchased. In interaction, the two vehicles act particularly quick and efficient. During the tool change, one vehicle takes the tool out of the machine, while the second tool changer is already waiting with the new tool. The use of two tool changers reduces set-up times and at the same time increases process availability.

Tool changing trolley

Punching machines with narrow accesses

Growing product diversity led a manufacturer of connectors to rethink the storage, transport and changing of its tools. Putting the tools on lifting tables and pushing them into the punching machines by muscle power no longer seemed up to date. One challenge, however, was that the accesses to the sound-absorbing automatic stamping machines were secured by fences and are only 1 m wide. Together with Genkinger, two multi-way platform trolleys were designed, which fulfil the requirements for dimensions as well as for safety, among other things by:

- Variable stroke range for different punch presses
- Hydraulic roller bars for easy tool transfer

Tool changing trolley

Fixed ladder as a benefit

The 17 tons low lift truck is used to transport injection moulding tools that are taken out of the machines by crane. Our customer had the problem that the operators climbed in a dangerous way onto the tool to release the hook because the ladders provided were not always immediately ready on site. The solution is a simple but safe platform with an attached ladder that can be pushed in and out. Employees and the employers‘ insurance are delighted, because tool transport is now much safer.

Special features:

- Access platform with ladder
- Fixing points for high tools

Low-lift truck

Load suspension with Prismatic tines

The manufacturer of steel cables for cable cars and architectural projects was looking for an efficient method to move heavy cable drums inhouse - and now relies on the Genkinger low-lift truck. The load is picked up with prismatic tines that lift the heavy rope drums freely. Thanks to the compact design, the operator always has a good overview. The low-lift truck takes over many tasks that were previously performed by a much larger heavy-duty forklift truck.

The advantages for the customer:

- Less manoeuvering space required
- Low total weight due to omission of a counterweight
- Emission-free and quiet drive

High-lift truck

Exact placement in front of 500 kN press

The upper part of the tool weighs some 75 kg and has to be changed regularly on a 500 kN press. The press cannot be underdriven by the carrier and the tools have to be positioned at a depth of 700 mm. Our customer set equipment dimensions of 1100 x 550 mm as a requirement. We met this in the form of a manual high-lift carriage with electric lift and double telescopic load arm, which is mounted floating on linear guides. The telescopic table has an extension of 450 mm, which allows the tool to enter the press exactly.

Manipulator with winch

Sieve change with additional benefits

This winch manipulator removes and changes sieves in the production plant of a starch and sweetener factory. This is done in very confined spaces with a hydraulically telescopic load boom equipped with a crane hook as well as a load traverse.

Since screen changes only take place sporadically, the operator was looking for an additional benefit to make the investment more economical. The Genkinger machine now also proves itself in the recovery of machine parts from 4 m deep pits - the costs for an external service provider are obsolete. For these tasks, the machine was also equipped with a hoisting winch and an adaptable pulley.

Reusable forklift

One for (almost) every kind of load

The spare parts warehouse of a wastewater plant for Berlin contains many different parts and components to ensure trouble-free operation 24/7. In addition to pumps, valves and gate valves, they also store long shafts and pipes there. Genkinger developed a radio remote-controlled multidirectional forklift for their use. It can pick up, transport and store almost all parts. A removable long goods traverse is used for extra-long goods. A lift mast with a lifting height of over 6,000 mm even allows goods to be lifted through an opening in the ceiling to the second floor. An automatic lift stop for heavy goods ensures the necessary safety

Platform trolley

Safe transport of of heavy metal parts

A manufacturer of recycling machines for paper, wood and metal requires a platform truck for loads of up to 11 tons for heavy metal parts in raw material production. These are mainly shredders, blanks and finished goods. In view of the high weights and different shapes, the platform had to be equipped with an additional safety device. In addition to the heavy metal parts, the platform trailer also accommodates the frames of the machines required for the basic structure, which increases the utility value of the Genkinger device. These frames are bulky long items: approx. 7 to 8 metres long and 2.50 to 3 metres wide, and, like the shredders, are transported to the assembly area over a journey of several hundred metres.

Handling, weaving and knitting

Process optimization and automation

Process optimization and automation are the driving topics in the textile industry. Some of our devices are directly integrated into the production processes. Previously tough routes to travel, e.g. from warp beams to the machines, can now be travelled more ergonomically and efficiently. Now the customer is able to serve the orders by a single person or even automated in future. Higher efficiency is also being achieved with increasingly complex weaving machines. In the application (far left), the warp beams are arranged in two layers. The heavy machine with overhanging grippers is designed for a long service life, approx. 20 to 30 years, depending on utilisation.

Wheelset changer

Service devices between rails

Complete wheel sets are regularly replaced on urban railways, trams and trains for repair, cleaning and testing purposes. Genkinger has developed special vehicles for this purpose. During operation, one vehicle removes the worn set and the second vehicle is waiting with the new wheel set. The vehicles fit exactly between the rails, a sensitive drive positions the vehicle with millimetre precision and the sideshift helps to adjust the exact mounting position. A full free lift mast ensures a low overall height.

Storage and retrieval machine

Spare parts in 1,300 mm aisle

In a large aviation company, the spare part warehouse is very high up. On the third floor of the large warehouse, a special device ensures that urgently needed spare parts are dispatched quickly. A standard narrow aisle machine would have been too heavy for the building. So the specialists at Genkinger developed a lightweight and efficient solution. Aisle guide rollers keep the vehicle on track in the aisle, which is only 1,300 mm wide. Lasers on the load pick-up ensure that the telescopic forks are in the correct position for storing or retrieving pallets.

Tool change trolley

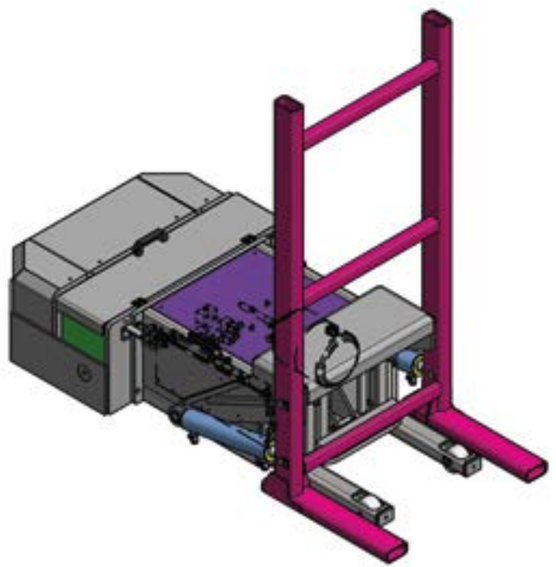
60° angle for hot tempered tools

A company in the packaging industry changes tools weighing 350 kg with a Genkinger device. It inserts the tools into a stamping machine at an angle of 60°. As the tool is very hot after use, it cannot be touched. A floor mounted rail ensures that the vehicle is in the right place. A digital device for measuring the angle helps to pick up the tools. The industrial truck also places the workpieces on a shelf over 2 metres in height. The footprint is only 1.36 square metres, and the carbon footprint is also not large due to the durability of the device.

High lift truck

Sensitive grand piano carefully packed

A piano manufacturer uses a Genkinger device to transport, pack and dispatch musical instruments. The „lift mast“ of the radio-controlled device serves as a load support in a horizontal position. The piano is lifted up from 500 mm to 800 mm and the feet can be removed. A trolley is positioned on the forks before the load is lowered. The „mast“ is then tilted by 90 degrees so that the instrument is positioned vertically on the trolley. After lowering the lifting unit, the grand piano can be moved away on the trolley.



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