
ManUp Turret Order Picking Forklift

STEINBOCK
Product Features



VNA Technology
EK 1100 – EK 2000 and more ...



Magaziner Series – Turret Forklift

With the experience of building over 4000 custom Man-Up style Turret Trucks. The STEINBOCK Magaziner Series represents a multi-faceted further development of new & proven technology.

At its inception, the EK vehicles had to excel in all areas, in order to compete with full line manufacturers that utilize this style of vehicle as a flagship model.

- Ergonomic & Design
- Productivity / Efficiency
- Safety
- Service-ability



EK - Models

Basic Chassis

Base capacities are rated @ 24" LC in length & lateral position up to the height shown.

* Detail specs are influenced by chassis length, width / load dimensions / aisle size.

** HL model rated @ 41" LC

<u>MODEL</u>	<u>CAPACITY @ HT</u>	<u>LENGTH*</u>	<u>WHEELBASE*</u>	<u>BATTERY/OPTION*</u>
EK 1100	2425 lbs @ 303"	128.9"	70.1"	48v 750Ah / 80v 465Ah
EK 1200	2645 lbs @ 303"	131.3"	72.4"	48v 900Ah / 80v 450Ah
EK 1300	2865 lbs @ 224"	131.3"	72.4"	48v 930Ah / 80v 550Ah
EK 1350	3000 lbs @ 342"	132.9"	74.0"	80v 550 Ah
EK 1500	3300 lbs @ 394"	143.7"	84.3"	80v 930 Ah
EK 1500XL	3300 lbs @ 394"	143.7"		80 v 930 Ah
EK 2000	4400 lbs @ 204"	147.2"	84.3"	80 v 930 Ah
EK 2000HL**	4400 lbs @ 276"	147.2"		80 v 930 Ah
MAYESTO	2700 lbs @ 387"	172.0"		80 v 930 Ah

- The EK series was designed and developed to meet the demands of unit load handling in very narrow aisle while retaining case load & order picking capabilities.
- EK series models offer the most extensive range of vehicles and features available.
- EK model Lift height available up to and over 55.0 ft and operates with 4th generation ~AC control technology – for speed and battery efficiency !
- Aisle width (AST) as small as 48" dependent on size and weight of load, stacking/picking height requirement and type of guidance system.
- The EK can be equipped with inductive wire guidance or roller/rail guidance.
- The EK is designed and built for high productivity, ease of operation, safety, reliability and durability, combined with ease of maintenance.



Productivity

- Touch button control of the load handling functions with customer choice of console*
- options that control the proportional speed of the selected function.
- The lift mast, a Steinbock proven design, with unique frame bracing that offers stronger yet lighter manufacturing weights to lower the overall vehicle center of gravity, while providing improved operator visibility. Duplex & Triplex mast options are available.
- Secondary mast heights of 66.9" or 90.5" maximize storage heights under ceiling obstructions. Note that custom height increments are also available.
- Powered by a 48 / 80 volt AC brushless low energy consumption motor technology, the 12.5 – 26.0 kW hydraulic & 5.0 – 7.0 kW traction motors easily extend shift operation. Model and battery dependant – lift speeds up to 106 fpm.
- Combined secondary and main mast lowering provide for faster individual work cycles. The feature can also be provided while lifting.
- Easy to read color graphics display / spacious compartment with carpet covered walls and thick cushioned floor, provide the operator with a large range of motion for order picking tasks in a safe and secure enclosed compartment.
- Synchronized rotating of the forks. Laden and unladen, (aisle width & load permitting) increases the load handling speed.
- Battery handling with a standard forklift "battery frame" or roll out capability with "battery rollers" provide a fast multi-shift change capability. A power rail coupled with onboard high frequency charger option available to supply power 24 hours.
- Vehicles are designed and built to suit customer applications, with numerous load handling devices & cab styles to suit all requirements individually.
- Heavy lift requirements or oversized loads are easily handled by the HL model with a rated capacity of 4400 lbs at a 41" load center to a lift height of 276".
- The "driverless" Mayesto is a true AGV operating in rail guided narrow aisles and magnetic gyro navigation in transfer aisles – shipping / loading – or free roaming areas. The laser scanning obstacle detection / dimension measuring load positioning system is combined via RF with a powerful and customizable LOGO vehicle transport software control system.

Ergonomic - Design

Generous size operator compartment allows entrance and exit from both sides. Cabin gates fitted with 3 folding safety bars and integrated safety sensor. Kick plate / mid high knee protection / top bar with padded comfort handle.

Inside clear cabin height standard 80.7" or built to suit.



Compact turret frame minimizes the load center and overall vehicle length. The narrow depth enhances the operator reach to the transported pallet.

Interior cabin space available to suit tall operators and a wide variety of onboard enhancements: such as shelves, clipboard, document and water bottle holders.

Comfortable entry & exit step height due to the integrated wheel well design.



Load wheels are enclosed and protected. The **unique eccentric adjustable load axle** assists in vehicle leveling when only one wheel is replaced.

The adjustable console is ideal for standing or seated vehicle operation.



Order picking without obstruction across the entire width of the compartment.

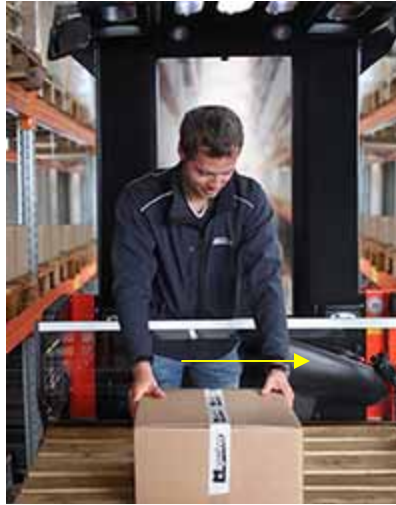
A downward folding operator seat option offers back support for the standing operator.

Ergonomic - Design

Magaziner EK Series option side tilt operator console offers maximum flexibility.

Easy order selecting and freedom of movement.

The tilting console can be moved left or right to enhance ergonomics and comfort. Access to the pallet in front of the operator is unhindered.



Extensive Order Picking requires the proper ergonomic work environment.

All EK models are available with tilt out side gates and tilt console options. The reach distance to the pallet or storage rack is reduced to increase productivity and reduce back stress on the operator.

Maintain the comfort of the standard forward facing operator console with easy to read color graphics.



Interior cabin space should be functional, with sufficient lighting, work space, document and tool holders.

Operator preference – configure your EK vehicle to suit.

The adjustable console is ideal for standing or seated vehicle operation.



Order picking without obstruction in the front or rear of the compartment.

Ergonomic - Design

Ergonomic designed cabin with generous leg room and a secure platform environment for operator freedom without the need for a tether.

Safety first – all enclosed cabin with electrical interlocks stops travel and hydraulic functions when the gate is open.

Thick cushioned padded floor mat absorbs vibration, decreasing operator fatigue.



Exceptional leg room for freedom of movement and relaxed seating.

Unobstructed work place optimizes the order picking process.

Carpet covered walls, knee board and cushioned floor add to the overall well being of the operator by reducing stress.

Large rear cabin window provides excellent rearward visibility while also protecting the operator.

Of course options include completely enclosed cab for freezer operation. Heater – thermo pane - heated windows and sliding glass wind screen option for pick operations etc . .



Good unobstructed view of the vehicle travel path in both forward and reverse travel directions. Large knee wall windows allow the operator to view the floor from a seated position. The enclosed cab prevents operators from mistakenly placing feet and limbs in harms way. It also protects the operator from errant loads protruding into the very narrow vehicle aisle by offering sturdy protection.

Ergonomic - Design

Greater operator comfort with a standard cabin depth of 24".

Fully adjustable single piece operator console, only 20.5" x 5.9"

Easy to operate joystick, rotation knob or thumb controls for travel and hydraulics.

Weight adjustable cushioned seat with many options eg. (fold down w. back support – adjustable / folding arm rests)

Cushioned non slip floor mat.

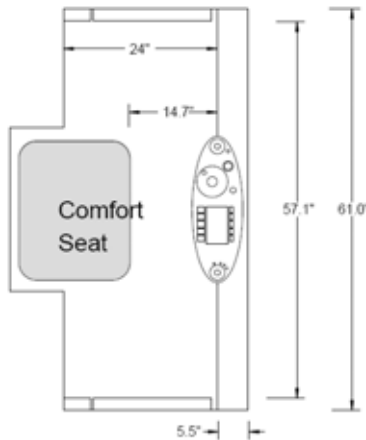
Insulated front knee wall with large view windows for seated operator visibility.

Bright halogen work lamps and spot lights allow operation in dimly lit warehouse environments.

Variety of document holders, mounted clip boards, cabin shelves.

Adjustable cabin corner mounted rearview mirrors.

Operator compartment width equal to the load handler dimension.



Safety First "fully enclosed" operator cabin with travel and hydraulic control interlocks.

Deadman foot switch and 2 hand operational controls are required in the very narrow aisle.

The enclosed operator compartment protects the driver against errant loads while hands and feet are well protected.

A number of different cab and load handler styles are available. Cab styles are not limited to the standard fully enclosed safety cabin.

Variety of cab styles include: center walkthrough, split rear control option, open compartment, corner gates, and air conditioned, heated cab environments.

The EK series is designed for safety & sports a unique 3rd un-loaded lift chain, hose rupture check valves and slack chain tension sensors with logic interlocks to supply unparalleled man-up safety.

We take man-up safety to the highest level.

Ergonomic - Design

Fully enclosed compartment with split rear mounted individually adjustable control consoles.

Front gates allow full access to the load during pick operations.

Select one of the many different style load handlers and gates to suit your specific operation.



For larger cumbersome loads the low profile load handler with roof support and corner gates maintain the enclosed operator safety environment while providing access to the rack and load simultaneously.

Safety First “fully enclosed” operator cabins are provided with full travel and hydraulic control interlocks.



Ergonomic & Productive

Compact and centrally located control console faces the load, allowing the operator a forward unobstructed view of the travel path

Console arrangement includes main operator functions such as: travel, main and auxiliary lift functions, sideshift, rotation, synchro shift / rotation, combined lowering of the main and aux mast, horn lights, steering and guidance system controls.



The graphic display features all important vehicle data such as: battery capacity, steered wheel position, wire guidance mode, hour meter, time (optional digital lift height indication) functional commands, operational conditions – all at a glance on the color LCD screen.



Ergonomic & Productive

Driver Ergonomics

Particular attention went into the design of the operating cabin, a deep spacious area with adjustable control console for standing or seated operation. The fully adjustable seat - set deep within the wrap around mast sections, ensure the operators safety, comfort while providing a productive work environment. Powerful 'brushless' ~AC motors and tuned hydraulic components provide efficient and dynamic work cycles with low noise levels for continued operator comfort over long shifts.

Bright halogen lighting enables the operator to work in warehouses with low or insufficient lighting.

Forward Facing Controls –

The slim compact driver console – forward facing compartment – spacious cabin area and slim traverse turret design further enhances order picking operations.



Ergonomic & Productive

Control Console

The ergonomically designed driver console with easy to read color display, incorporated steered wheel position indicator, and operational function icons ensure that the truck controls are easy to use. Two hand control system carefully positioned, with easy to operate travel controller (right side) and hydraulic control (left side) guarantee a minimum fatigue factor over long shift operations.



The steering wheel is responsive and positive providing safe maneuvering in confined transfer aisles. The hydraulic function selection can be initiated on the display or via finger / thumb button and progressive hand control of the appropriate console option (joystick, rotation knob, thumb lever). Diagonal travel (lift and travel), in the very narrow aisle offer a productive safe operation.

Safety Design

Slack Chain sensing & Additional Safety Chain

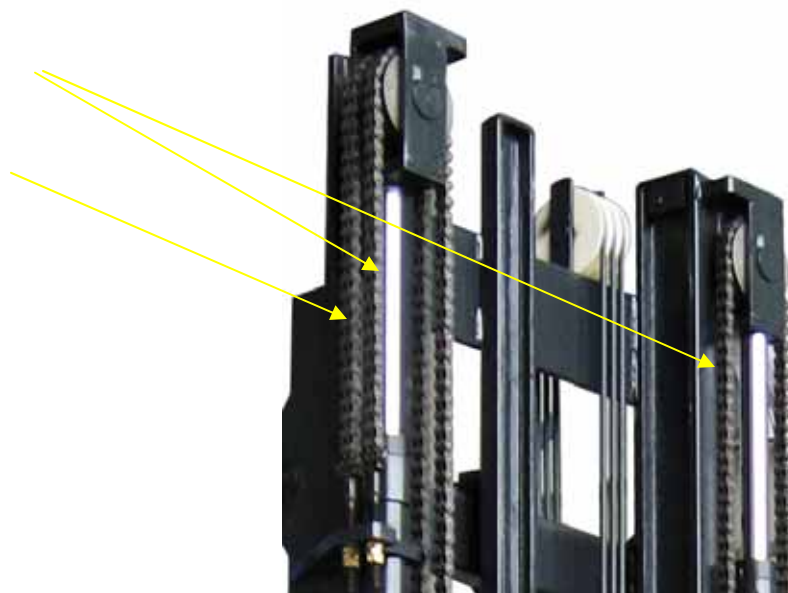
Should the most unlikely situation arise – eg the operator accidentally catching the forks or pallet on the rack when lowering – the lift chains could become slack. If the operator continued to lower, damage could be caused to the rack or load. Further, if nothing were to prevent this so much slack could cause an accelerated drop of the fork carriage or cabin upon its release.

To eliminate this possibility, the Steinbock EK is fitted with “slack chain” sensing. Should the lift chains ever become slack (without load) for whatever reason, the safety system immediately prevents further lowering via the controls. The operator is prompted to raise the cab or load off the hazard in order to continue operation.

The EK slack chain and hose rupture safety also employs what NO other man-up truck provides. A redundant cab support backup system for a man-up elevator style safety. The unique safety chain operates normally in an unloaded capacity – providing the extra measure of safety.

Lift chains

Safety chain
ON ALL
MAST
SECTIONS



Mast - Design

High Strength Mast

Mast sections shown in production are normally not a selling feature. In our case it is more than note worthy.

Of course Duplex and Triplex masts are available to meet the customers specific needs. Both types offer the patented “spaceframe” design – very strong and rigid. The “wrap-around design supplies the rigidity in both front / rear as well as side stability.

Stability is critical when elevating an operator and loads to work at heights up to **55 feet**. The design also resists the lateral and torsion stress created by traversing and rotating loads.

High Visibility Masts

The special designed nesting mast sections, coupled with widely spaced twin lift cylinders mounted outside of the vertical mast sections, ensure a high degree of rearward visibility.

* EK 1100 – 1300 masts differ in design due to lighter weights and limited height requirements.



Safety Controls

Two Handed Control

All travel and operating functions inside the very narrow aisle require both hands to be in position on the controls. The reason for this is simple – NO one should be in a position to place their hands & feet outside of the confines of the cab. This safety feature ensures that the operator cannot travel / raise or lower “one handed” and risk trapping the other hand / arm in the rack or between the rack / load / vehicle.

One of the operating benefits of this two handed control, is diagonal travel. Lift or lower while traveling when desired even the auxiliary mast can be included in simultaneous lift or lower operations. Safety is enhanced and work cycle times reduced, increasing the overall capability to provide maximum material movement or throughput.

The EK safety system also prevents travel while traversing or rotating the load. It is simple to allow the operator this functionality however the risk of an accident or damage is a considerable one.

The enclosed operator compartment incorporates travel interlocking gates on both sides of the vehicle. Each gate consists of lower kick barrier, mid high knee barrier and top padded hand rail.



Quality & Reliability

Tires



They may not be pretty but form the basis of support for your vehicle. The EK series offers an option for dual load tires to reduce floor load psi on sub par floors.



Note that the EK has an enclosed wheel well providing protection against damage to the tires from protruding loads or obstacles. A cut tire is cause for premature replacement.



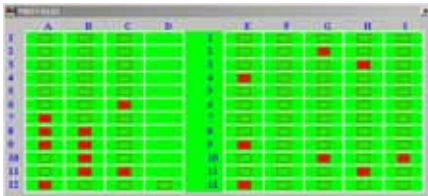
Naturally guide rollers are placed forward of the load tire to prevent damage from the guide rails upon entry. The unique eccentric axle allows height adjustment to level the vehicle when only one tire is replaced.



Quality & Reliability

Reliability (Truck Service & Management Center)

EK vehicles are provided with a diagnostic board DLB, which is used to monitor various vehicle I/O signals allowing the technician to recognize an error condition without the use of a laptop or special tools – NO software or license required.



Optionally the vehicle can be diagnosed remotely via GSM (global satellite modem).

In general the LED interface makes servicing simple to complete.



Individual Amp connectors and wiring provide accessibility via multi-meter & diagnostics to the technician, or in layman's terms "Old School"

The vehicle combines the latest firmware for software analysis yet offers what technicians want most.

"Old School"

The ability to trouble shoot individually with a hands on approach. To determine or understand the operation or problem, NOT debug what a software programmer believes the problem to be.

Quality & Reliability

Precision Control / Easy Maintenance Access

All vital controls, traction, hydraulic and steering are well protected by thick steel doors. Once open the doors themselves can also be removed by lifting them from the hinge pin – carefully they are heavy.

The controller panel pivots down and out to provide maximum accessibility.

Motors

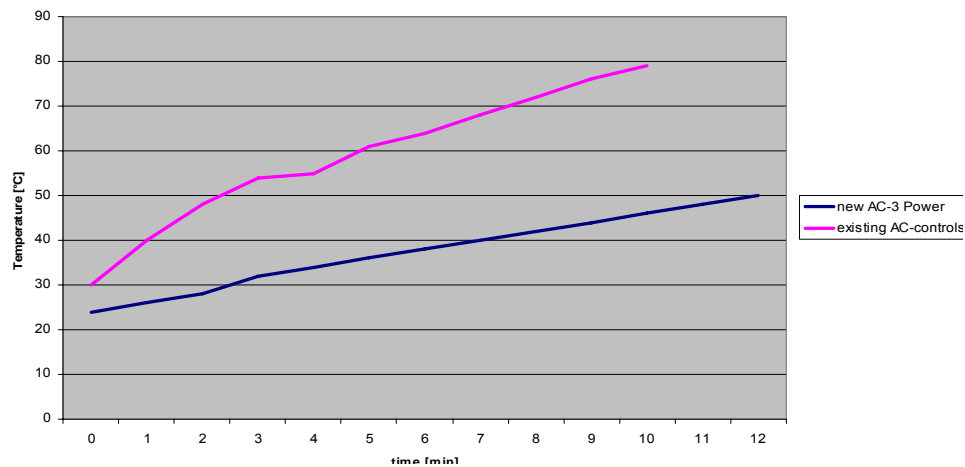
All motors are 4G brushless ~AC technology. System provides only the power required to achieve the desired operating or travel speed. Battery power is not wasted rather returned with regenerative braking.



Efficiency

Electrical System

The EK has a powerful 48 or 80 volt electrical system. This ensures fast lift speeds, rapid acceleration and fast travel speeds, resulting in productivity. The EK vehicles will give more work cycles per battery charge than similar vehicles. A comprehensive energy study utilizing the customers layout will show cycle times and consumption (available from PMH).



Fourth generation of ~AC controllers offers longer shift cycles with equal battery capacities. The optimized systems generate less heat maintaining cooler temperatures, increased efficiency with regenerative energy returned to the battery.

NO contactors

NO motor brushes

Ultimate in service friendly – clean environment (No carbon dust build up).

Travel – Hydraulic – Steering Motors are all ~AC

Components

Rear cover in place



Rear cover removed

Wire Guided steering

Lowering Regulator

WG interface

Electronic board MB07



Components

Doors



Fully protected.

Thick steel ribbed doors protect vital components and open to reveal the motor compartment. Closed doors bolt against the solid enclosed transmission support block.

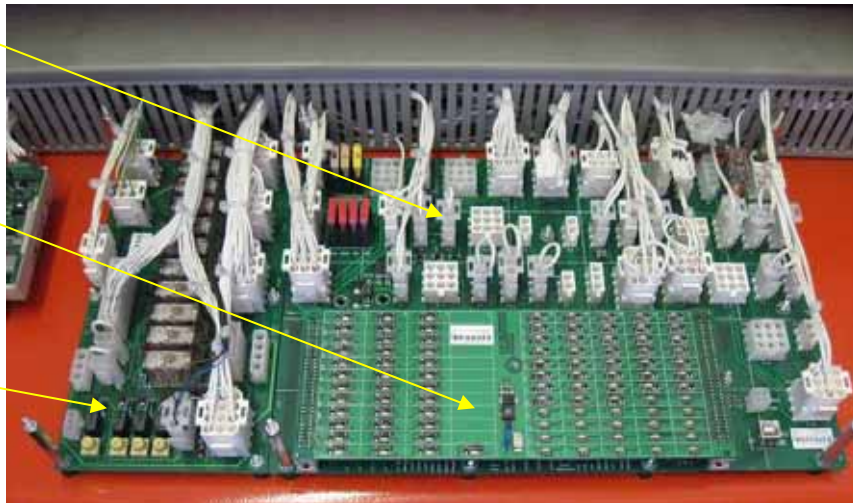
Remove the doors by lifting them off the hinge pin after disconnecting the integrated ventilation fan.

Components

MB07

DLB
diagnostic
board

Wire
Guidance
Interface



MB07

NO
DLB
diagnostic
board



Components

Hydraulic Motor



Drive Motor



Controller Panel



Steer Motor

Motors have internal encoder bearings and thermal sensors

EK 1100 – 1300 standard 48V / 775 – 930 Ah
 5.0 KW travel motor
 12.5 KW hydraulic motor

Optional power EK 1100 – 1300 80 V

EK 1350 – 2000 standard 80V / 465 – 775 Ah
 7.0 KW
 21.0 KW & high performance 26.0 KW hydraulic motors

High performance lift speeds available to
 106 fpm

Components

Pull on the controller panel handle to pivot the panel downward.

Hydraulic & Travel controllers



Fuse panel



Components

Emergency Lowering



Should the unexpected happen and the operator is incapacitated or incapable of lowering.

The emergency lowering valve will lower the main lift and cab assembly.

For convenience the appropriate wrench is secured just aft of the drive motor.



Components

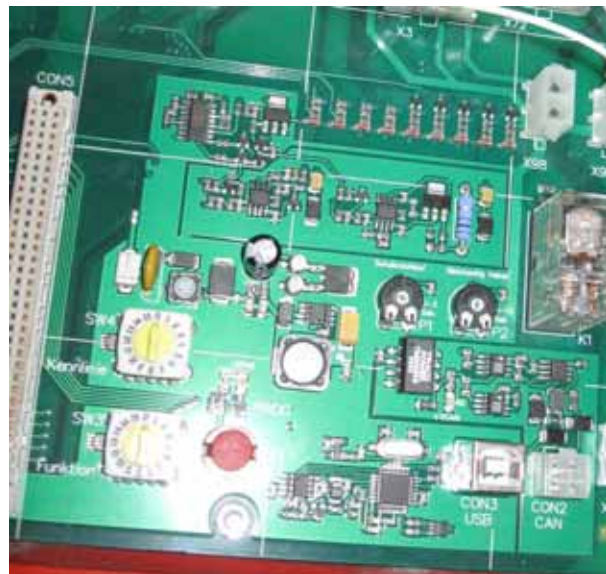
Cabin – under seat MB06 (shown without DLB diagnostic board)

Hydraulic programming provided with onboard and PC connection capability.

Hydraulic speeds / dampening and ramp times can be programmed by selecting the appropriate function and corresponding value on the dials. Pushing the red button stores the value.

No software license requirements for PC connection.

Standard LED indicators for both Cab and Chassis boards are located under the DLB connection.



Components

Operator Console

Uncovered & view from underneath the exposed console.



Maintenance

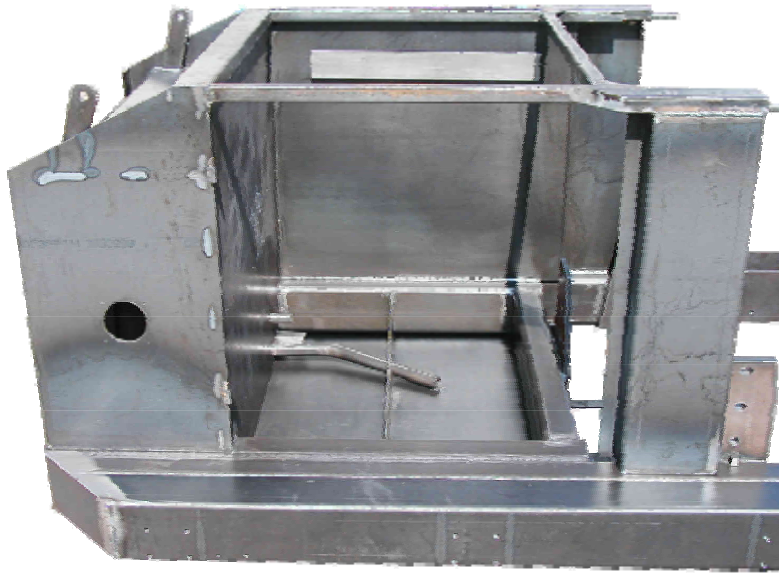
Below Deck

The EK can be viewed from the bottom, showing an enclosed and well protected chassis. As one can see there is nothing to service underneath the vehicle. The rectangular cutouts are for floor sensors RF id and floor magnets, used to identify warehouse zones and set vehicle characteristics such as limiting / enabling lift, variable depth load insertions, speeds, all to suit the individual customer requirement.



Quality & Reliability

Chassis



The hydraulic tank has been integrated into the chassis. The 2" thick steel bottom plate forms the floor and the structural components the remainder of the tank. The large capacity tank and surrounding metal provide an ample cooling surface to keep the hydraulic fluid temperatures below abnormal levels.

The tanks low out of the way position eliminates the possibility of damage reduces fluid leaks onto electrical components. The EK multiple hydraulic filter system maintains a clean fluid environment. The EK vehicles are equipped with a return filter as well as a pressure filter.

The hydraulic filler port and oil level indicator glass are located in the motor compartment. The drain plug is located toward the front in the vehicle frame work.

Battery Changing

The EK vehicles provide an option for battery rollers for use with stationary or mobile battery changing carts.

Larger batteries may require a winch system to assist with moving the batteries in or out of the vehicle.



As standard equipment the vehicles come with a battery frame. Using a counter-balanced forklift battery replacement is made simple and easy. The battery frame rests inside specially provided pockets to secure the battery and frame against movement.

Battery Charge Rail

Vehicle mounted charger & collector trolley



Specially designed high frequency chargers provide multiple shift use without the requirement to change or charge batteries. The collector trolley above is shown entering the power rail mounted to the rack system.



EK 1100

From the smallest turret truck foot print available on the market today to the tallest. Our capabilities cover a wide range providing our customers with an assortment of solutions.



Features

Operator Console

Load Handling Attachment

Steering & Wire Guidance

Traction & Hydraulic Systems

CAN open field bus with simple service friendly controllers.

Data evaluation via DLB (LED grid) or optional DMB – PC evaluation – NO software license requirement. Software is firmware resident in the vehicle.

Service friendly via multi-meter for those who wish to diagnose the equipment not the software.

Open architecture allows customer to help themselves.

Diagnostics in a logical fashion. The inputs and outputs are evaluated – the cause determined by a technician NOT a software programmer.

Setup vehicle parameters with onboard programming or with a simple handheld device or a PC laptop computer.

Top Rail Support



The EK Series turret truck is versatile from design to systems integration and functionality. Considering a high bay double deep storage facility to maximize storage space, we have you covered. Looking to replace an aging stacker system, we can give you flexibility. Adding on-board charging to the vehicle and the enclosed power rail system to your aisle, provides a 24 hour operational availability and eliminates the need for extra batteries, battery change and charging stations.

EK Series – Automation

MAYESTO is an automated driverless narrow aisle stacker, that operates freely outside of the navigation.

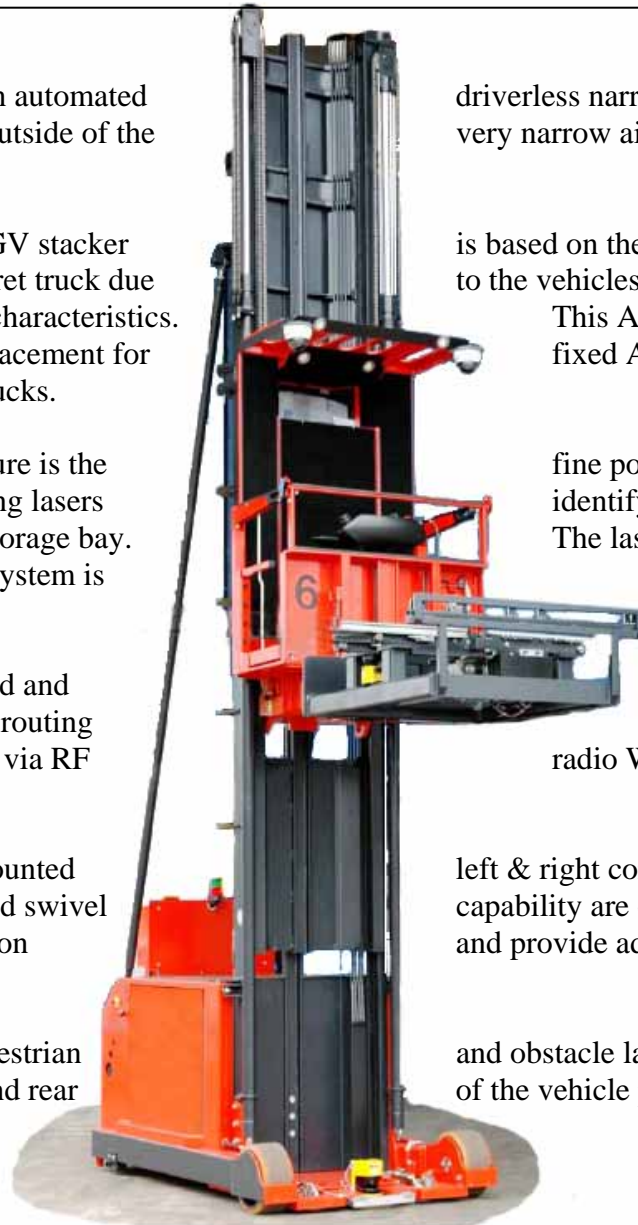
The high bay AGV stacker EK 1500 XL turret truck due mast deflection characteristics, suitable as a replacement for manned turret trucks.

One special feature is the where re-adjusting lasers and size of the storage bay, and adjustment system is

A fully developed and system manages routing communications via RF the vehicle.

Two cameras mounted cabin with tilt and swivel WLAN connection roving sentry.

Independent pedestrian mounted front and rear bumper zone.



driverless narrow aisle stacker, that very narrow aisle via magnetic gyro

is based on the high performance to the vehicles inherent stability and This AGV operates as a fixed AS/RS systems or

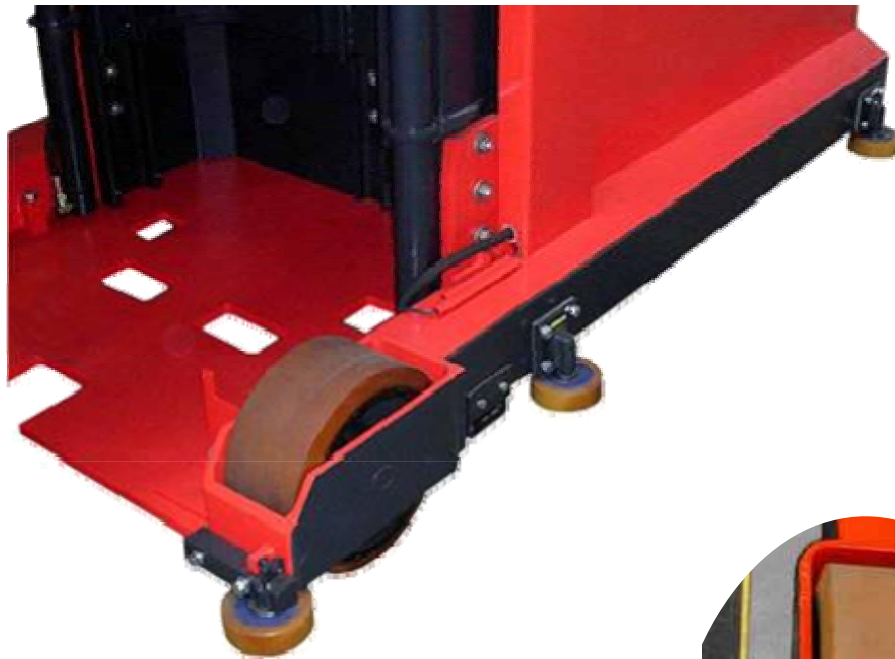
fine positioning system, identify the precise height The laser – based measuring extremely fast.

matured control task assignment and radio WLAN link from PC to

left & right corners of the operator capability are operated by the remote and provide additional security as a

and obstacle laser scanning system of the vehicle provide a virtual safety

Rail Guidance



Electronic Power steering

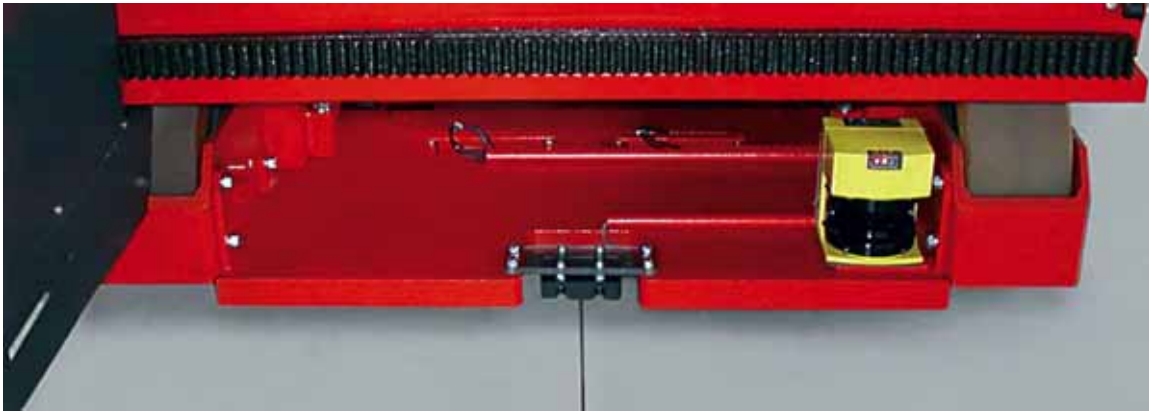
When outside the narrow aisle, finger tip safe and responsive steering control is ensured by the ~AC controller.

The system automatically sets the steered wheel straight after engaging the rail / roller guided aisle. Manual steering inside the rail guided aisle is then disabled.

Steering is automatically returned to the operator upon exiting the rail guided aisle of course the wheel remains straight until manually directed to turn.



Wire Guidance



The ~AC brushless motor powers the steered motor. The internal encoder provides positive and responsive steering feedback. The integrated smart antenna, used when operating over the wire guide path, can be found at the front and rear (middle) of the vehicle.

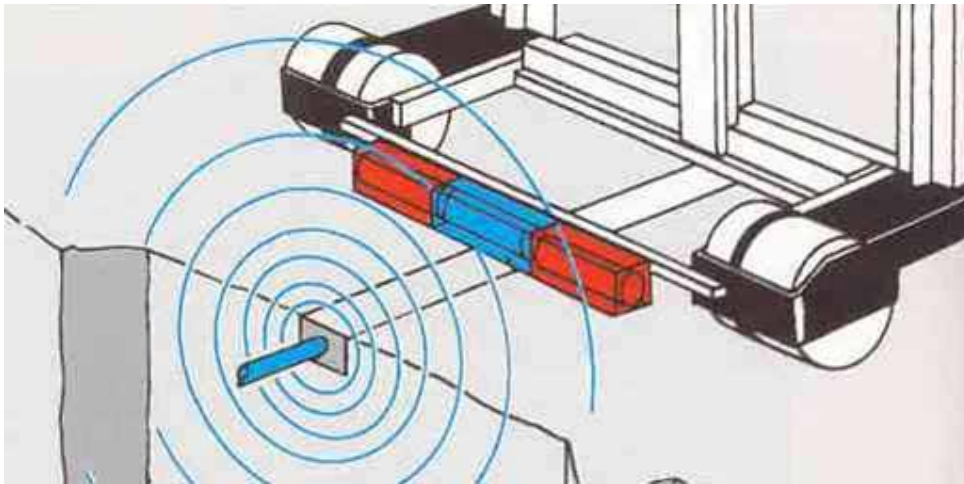
The yellow box shown on the right side of this picture shows the integrated forward facing pedestrian / obstacle detection scanner. The scanners are normally active in the narrow aisle and will slow & stop the vehicle if an object is detected.

The electronic power steering and guidance is integrated into a single controller providing a seamless transition from manual to captive steering.

When approaching the embedded wire with slow to moderate speed and the WG selector switch turned on the vehicle will automatically adjust the speed and steering response to acquire the wire path. Once locked on the green LED indicator gives the operator visual confirmation and speed is released to the allowable limit. The graphic display shows the position of the steered wheel at all times.

Velocity can be limited due to current cab or load height, end of aisle floor sensors, obstacle detection and even the deviation of the vehicle from the guide path based on the resulting steer angle required to maintain the accurate center over the buried inductive wire.

Wire Guidance



Wire Guidance defined

Wire guidance has been around for years. Technology has made significant gains in the overall system simplification. Days of tuning and adjusting are almost non-existent. It is important to take precautions during the planning of new facilities so that interference will not affect automatic steering operations.

Metal rebar or buried drains can effect the normal RF concentric circle emanated by the floor embedded wire. The wire is attached to a signal generator (also known as a line driver) forming a completed loop. The signal generator sends a low voltage sine wave through the wire. The signal frequency and strength may vary depending on manufacturer. The vehicle equipped with antenna seeks out this signal and steers according to the maximum field strength.

The EK smart antennas filter out minor deflections of the field and communicate in real-time via Can Bus to the steer / guidance controller. Adjustments are normally only necessary when implementing the system.

Load Handlers



Standard or most common MSG 320 turret, gear racks and channels are part of the front cabin wall.

All EK turret handlers are an integral part of the cab, and not as an add on attachment. The cabin width always matches the load and aisle size requirement, providing the maximum amount of space for the operator.

This design also reduces the space between the cab and the load, providing better stability and pick reach distance.

The MSG 320 utilizes the same cabin assembly, with the addition of a top & bottom auxiliary mast support. This design offers a solution for handling wider loads, and additional hydraulic functions such as fork positioners, or a sliding fork carriage solutions for customers with varying load widths that case pick – man to material.



Load Handlers



The MSG 120 turret load handler is supported at the base as well as from the overhead guard. Note that the handler and auxiliary lift are designed for more extreme applications.

The EK 1500 below was designed to handle pallets from a double deep rack application.



Unique Load Handlers

The MSG 330 replacement of manned style ASRS cranes this load handler rotates in the center of the aisle. Vehicle can travel at full velocity with forks in tuck or forward position. The necessary stroke is achieved with a combination mast and fork stroke. From center to left / right the auxiliary mast stroke is engaged, the extra stroke then provided via fork extension.

Works in very narrow aisles, but requires a Pick & Deposit station for load movement and minimum height for the first rack storage level.

Can be used with standard pallets.



Unique Load Handlers

Telescopic forks are available in a wide variety of configurations. For the basics the operation requires the use of EURO pallets or skid type pallets without a bottom board (eliminating the fork pocket). Naturally the EK vehicles can be adapted to operate with most any attachment such as: paper roll clamps, carton clamps, roll loaders, drum handlers, appliance carriers etc.



Wide Variety

Family resemblance in appearance, yet completely different. Look close, the EK 1100 narrow frame is designed to handle 30" deep pallet insertion. It has the MSG 320 turret handler, a completely different main and auxiliary mast and naturally the vehicle frame. The EK 2000 HL designed for very heavy large loads (@41" load center) sports the MSG 120 load handler supported on both top & bottom, dual load wheels, C-shape main mast, wide frame auxiliary mast and more.



Cab Styles



Adapting your vehicle to the warehouse environment may require a bit of thought. You have a choice and the operation will benefit from your decision. Should the cab be enclosed? This provides best solution for operator safety along with the 2-hand control requirement while operating inside the narrow aisle.

When the pick requirement dictates access to the transported pallet – a split operator control panel and interlocking gates are your next best option.



Of course even the standard front & side gate may not offer access to large racked items. Here, corner gates can provide a solution.

NO Gates – NO Protection – NOT recommended.

Cab Styles



Included in your choice of cab styles are some of the following items: operator console (split or front mounted - joystick / rotation / thumb controlled), depth of the compartment with or without shelves, type of seat (comfort – floating lumbar support / fold up or down with back support for standing operation). Yes, in an enclosed gated compartment the operator can stand and is not required to be belted in to a seated position.



In the above example our customer requested the maximum operator compartment depth without extending the cab for an order picking operation – a very simple folding seat was selected for the solution (our standard comfort seat version is also available in a fold up or down version which offers the standing operator a back support).

Cab Styles



EK vehicles are available with a fully enclosed cabs for operation in cooler and freezer.

Cabs can insulated, equipped with heaters, thermal double glazed windows to avoid condensation, sliding glass windows to allow occasional pick access as well as a variety of comfort items.

Customize the vehicle to suit your operation. The selection and possibilities start with a simple phone call.

Let the Pro's assist you with your logistics and narrow aisle storage questions without any obligations.

For Local Sales & Service

