



SAFETY PRODUCTS



GANDHI
Automations Pvt Ltd

India's **No.1** Entrance Automation & Loading Bay Equipment Company

Motorised Wheel Block System



Example of early vehicle departure

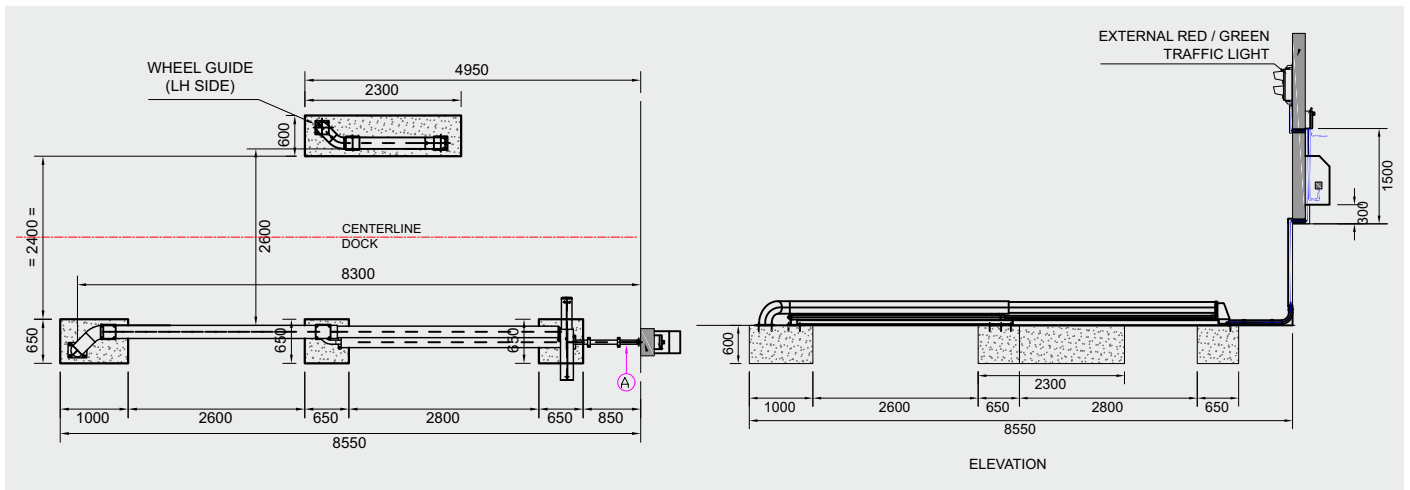


An integral sensor in the wheel block accurately determines the position of the rearmost wheel, whereupon the wheel block is automatically extended and the wheel is restrained.

The most sophisticated electrical hydraulic technology, operated via PLC and is controlled using a button on the control panel in the building. An integral sensor in the wheel block accurately determines the position of the rear most wheel, whereupon the wheel block is automatically extended and the wheel is restrained. The restraint process occurs in approx. 30 seconds regardless of the size and position of the wheel.

- The wheel block applies constant pressure against the wheel to prevent the vehicle from creeping forwards.
- Integrated wheel guides.
- Complete electrical hydraulic operation controlled via PLC.
- An acoustic alarm and warning lights are in being positioned.
- In addition; an external red/green traffic light ensures clear communication.
- Emergency release possible at all times.

Diagram



Gandhi Automations standard Motorised Wheel Block System is suitable for all types and size of trailer and trucks. Different types of wheel guides are available. These wheel guides will guide the vehicle for the perfect parking. This makes the Wheel Block a system which is extremely versatile. And it is easy to install on the ground.



Traffic Light



Wheel Guides



Acoustic Alarm

Wheel guides are hot dipped galvanized steel guides consisting of two round shaped pipes. Fixed on court pavement to grant perfect docking. While the wheel block is in operation the warning lights and alarms are in constant working.

The external red/green traffic light ensures clear indication. Once the wheel block's operation is done traffic light will become green and the driver will get the indication to move the vehicle.



Manual Wheel Block System

The wedge is put under a vehicle wheel, as to restrain its movement, which increases the safety-on-work.

- Heavy duty type, with rudder and positioning wheels
- Construction heavy duty rigid plastic component sandwich side covered with stainless steel plates, blocked by passing through tyres

Safety Truck Lock



The manual and motorised safety truck lock series is a low profile, non-impact design vehicle restraint featuring the Hydraulic / Mechanical floating system, a large spring-loaded barrier that automatically adjusts to various truck heights, maintaining positive contact during loading operations at all times.

Both Motorised and manual model can secure trailer with over 14.5 tons of restraining force. The barrier housing stores at only 225mm above grade, staying clear of incoming trucks, and has a vertical working range of 760mm above grade to safely engage even that highest of rear impact guards.

Gandhi Motorised & Manual Safety truck lock are designed to provide the highest level of safety based on your application. Safety truck lock are the only truck resistance in the industry that provide full-time communication of the lock's engagement status to the forklift driver.

Gandhi Motorised and manual truck lock offers the best protection against all type of trailer separation accidents dock lock are designed for impact and to withstand the loading dock environment while also featuring the most universal hook widest operating range enhanced track and stronger slope extension.

A loading dock separation accident is one in which a truck moves away from the dock while a forklift operator is unloading or loading the truck. Loading dock separation accidents can cause serious, long-term injuries or, even worse, fatalities for forklift operators.

There are extremely common kinds of loading dock separation accident like Early Departure, trailer creep, Trailer tip over etc that can happen, but preventative safety measures can minimize the risk of them happening in your facility.

Full time protection, full time communication only with Gandhi Motorised and manual safety truck lock.

MANUAL SAFETY TRUCK LOCK

MOTORISED SAFETY TRUCK LOCK



Control Card



Traffic Light



Control Card

- Non-Impact Design
- Barrier Stores 225mm high to Escape impact from low rear impact guards
- Barrier Sensor Communicates Positive Lock Position
- Barrier Automatically Adjusts to Truck Movement During Loading
- Vertical locking hook secures virtually all rear impact guards with in excess of 14.5 Tons of Restraining Force
- Easy to Install and Simple to Operate
- IP66 Control card enclosure
- Self Cleaning Guide Track
- Vertical Operating Range from 225mm to 760mm
- Easy to Install & Simple to Operate
- Inside and Outside Traffic Lights for Loading and unloading communication
- Virtually No Required Maintenance
- Housing Encloses Working Parts From Inclement Weather and Debris
- All Weather Hot Dip Galvanised components for Superior Durability
- Mounting Force in Excess of 45 Tons

Product application and specification





Motorised Safety Truck Lock Operation

The trailer is backed into position at the loading dock leveler until contacting the dock bumpers. The driver sets the brakes and chocks the wheels. The dock attendant pushes a control button that activates the safety truck lock barrier that will rise in the vertical track until contacting the rear impact guard and securing the trailer to the loading dock leveler. An override selector button will allow a bypass operation of the dock leveler while maintaining a red external signal light. The barrier provides a restraining force in excess of 14.5 tons. Adjusting automatically to trailer float during loading and unloading ensuring the trailer is fully restrained at all times. When loading/unloading is completed the dock attendant stores the barrier using the release button.

Manual Safety Truck Lock Operation

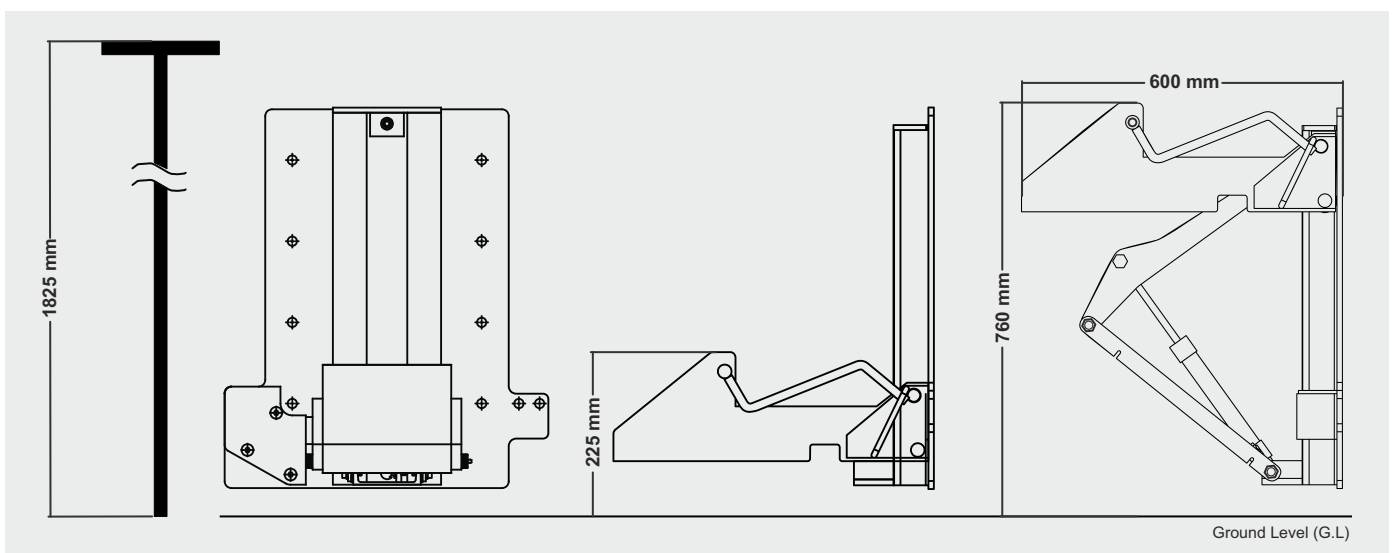
The trailer is backed into position at the loading dock leveler until contacting the dock bumpers. The driver sets the brakes and chocks the wheels. The dock attendant using the control bar activates the safety truck lock barrier that will rise in the vertical track until contacting the rear impact guard and securing the trailer to the loading dock leveler. The barrier provides a restraining force in excess of 14.5 tons.

Adjusting automatically to trailer float during loading and unloading ensuring trailer is fully restrained at all times. The restraint monitors for abnormal conditions and indicates it is unsafe to load with an inside red light if the rear impact guard is not detected. An override control is provided for use after a proper lock is determined by the dock attendant.

Communication

Safety equipment includes flashing red or green inside and outside lights, operator instructions and outside mounted sign with forward and reverse lettering for truck driver.

Product Dimension



Retractable Dock Safety Barrier



Help prevent loading dock accidents



Helps prevent fork trucks, pallet jacks, and pedestrians from falling off a loading dock

Helps protect the dangerous 1200mm drop off at the loading dock that can result in serious injuries that are sometimes fatal

Dock Safety Barrier is simple & easy to use safety solution for almost any loading dock. It has ability to help to prevent the serious life threatening accident.

The Retractable Dock Safety Barrier is designed to stop up to 13636 Kg (Refer impact rating chart for complete weight and speed ratings)

Retractable Dock Safety Barrier is made-up of bright black mesh curtain of height 1150mm with three heavy duty restraint strip. It also serves as a highly visible warning for operators and pedestrians.

It consist of two heavy duty 1200mm high orange warden guards anchored on either side of clear opening, which provides excellent door track protection. During loading or unloading, the dock safety barrier retracts into one of the wardens.

It's operated manually and easily fits across opening up to 5000mm wide

Gandhi Dock Safety Barriers Provide Full-time safety integration for Full time Protection

The Dock Safety Barrier is designed to interlocked with any loading bay equipment system (like Sectional Doors, Dock Levelers & Vehicle Restraint System and other existing loading bay equipment) to ensure full time loading dock safety.



1 The red light on the traffic light inside building indicates that the Dock Safety Barrier is locked safely across the opening.



2 The Vehicle Restraint System safely secures the trailer to the loading dock.



3 When Vehicle Restraint System securely connects the vehicle, the inside traffic light turns green, the dock safety barrier interlock releases, allowing for loading and unloading of a trailer.

Impact Rating Chart Retractable Dock Safety Barrier

Weight (kg)	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	13500
Speed (km/hr)	Kinetic Energy (Joules)											
3.0	1050	1400	1750	2100	2450	2800	3150	3450	3800	4150	4500	4700
4.0	1850	2450	3100	3700	4300	4950	5550	6150	6800	7400	8150	8300
4.5	2350	3100	3900	4700	5450	6250	7000	7800	8600	9350	10150	10550
5.5	3500	4650	5850	7000	8150	9350	11500	11650	12850	14000	15150	15750
6.5	4900	6500	8150	9800	11400	13050	14650	16300	17950	19550	21200	22000
7.0	5650	7550	9450	11350	13250	15100	17000	18900	20800	22700	24600	25500
8.0	7400	9900	12350	14800	17300	19750	22200	24700	27150	29600	32100	33300
8.5	8350	11150	13950	16700	19500	22300	25100	27850	30650	33450	36250	37600
9.5	10450	13900	17400	20900	24350	27850	31350	34800	38300	41800	45250	47000
10.0	11550	15400	19300	23150	27000	30850	34700	38600	42450	46300	50150	52100
11.0	14000	18650	23350	28000	32650	37350	42000	46700	51350	56000	60700	63000

Will absorb multiple impact at this level minimal damage

Will absorb an impact, may sustain damage

Will not absorb an impact this level

The barrier load and speed test (Chart expresses an impact rating in term of kinetic energy)



The SafetyKeeper is a twin barrier that makes elevated platform loading and unloading safer. It ensures full time safety at the edge of a mezzanine platform by keeping one entry closed at all times.

As per ANSI standard, there must be full-time protection when loading and unloading materials from an elevated platform. Industrial mezzanines must have handrails and gates around all edges however, these gates need to be opened from time-to-time to accommodate the loading and unloading process. Gandhi Automations offers the safety barrier solutions, the Safetykeeper.

Safe & Efficient

Safety challenges exist around every corner of industrial facilities, from forklifts zipping around workers and materials to hazardous machining processes that need to be guarded.

Safety barriers are typically used to separate workers and pedestrians from potentially hazardous operations or dangerous situations. They play an important role in helping industrial facilities operate safely and efficiently.

Multi-level environments create a number of advantages and efficiencies for companies but there are areas of concern that must be protected. Unprotected mezzanines or multi-level environments pose a high risk for employee related falls.

Space Utilizer

Nowadays as companies utilize their existing space maximum within their facilities, many are turning to mezzanines, elevated work platforms or multi-level work environments to create additional storage space or work areas for employees.

Controlled Access Areas

Installed on the edge where pallet loads from the floor level are regularly deposited for pick-up, the gate features a reciprocating barrier that is interconnected and can't be opened at the same time. When the outer gate opens to allow pallets to enter the mezzanine level, the inner gate automatically closes, keeping workers out.

Features

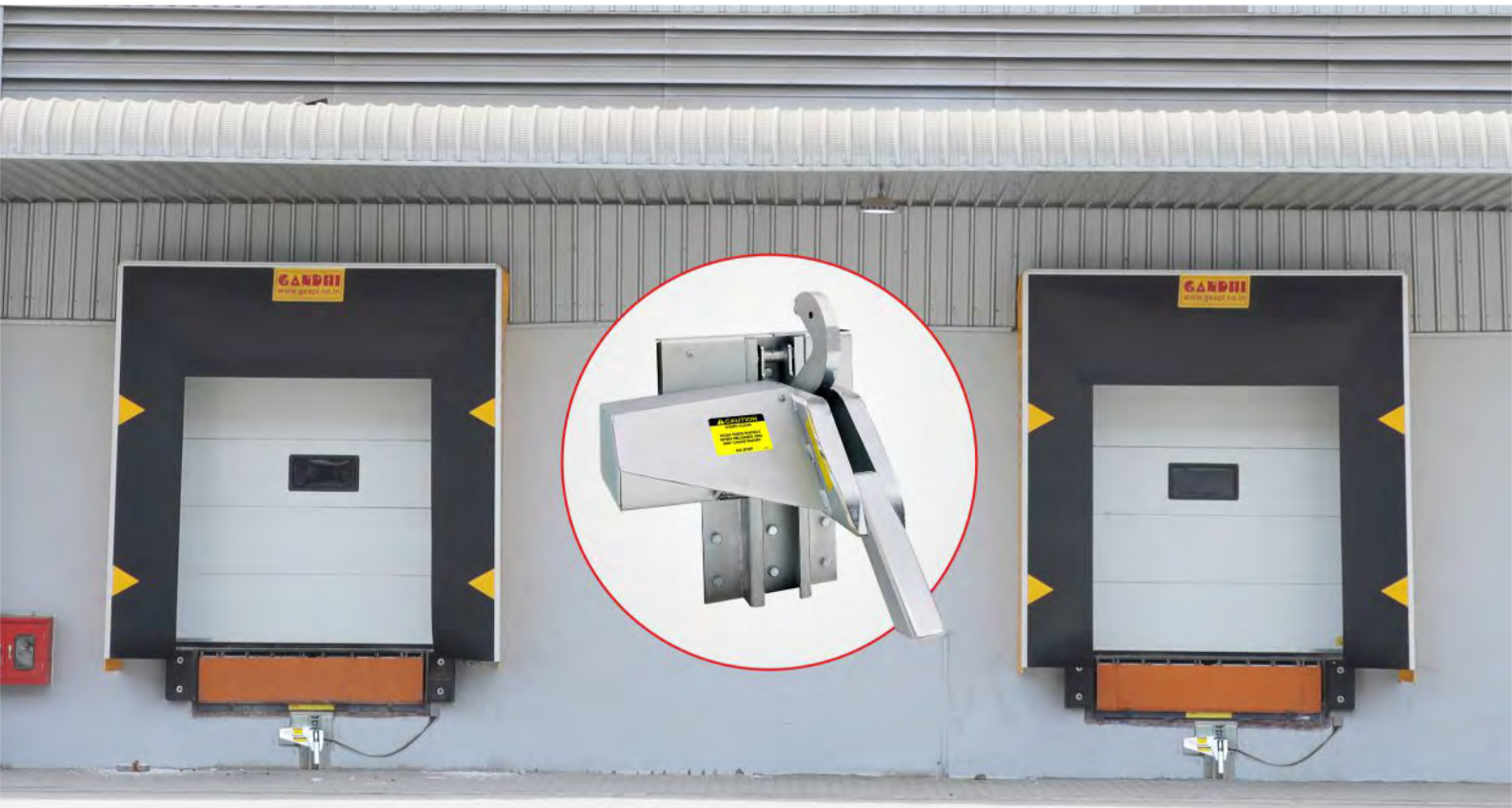
- Steel side frames provide built-in track protection
- Footrail / toe-edge prevents material from unintentionally being pushed from an elevated space to a lower level
- Exclusive design ensures that both gates work in unity
- Safety-Latch prevents an individual from raising the gate from inside the work zone, helping prevent an employee from falling from the mezzanine while working the load
- Galvanised track and nylon rollers provide for smooth operation
- Available in manual and automatic version



Avoid falls from elevated platforms or mezzanines



Clever Hook Truck Restraint



Safety and reliability are crucial factors when it comes to industrial loading bay equipment. Truck hook restraint systems are used to enhance safety, efficiency, and productivity during the loading and unloading of goods from trucks and trailers. The primary function of a vehicle restraint system is to prevent unintended movement of trucks and trailers while they are parked at a loading dock. This helps to avoid accidents, injuries, and damage to both personnel and equipment.

Whether unloading or loading manually or with a forklift or hand truck, vehicle movement is an avoidable hazard that puts loading bay personnel, equipment and cargo at risk. The most common hazards are

- Trailer Creep
- Early Departure
- Trailer Pop-Up or Up-Ending
- Landing Gear Collapse
- Trailer Pinch



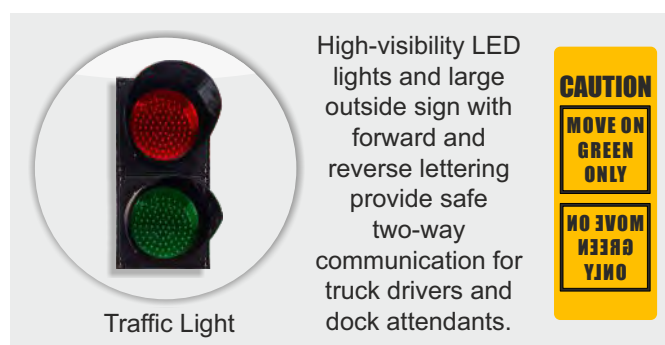
Automatic vehicle restraint designed to secure trucks at the loading dock by using a large rotating hook to engage a trailer's rear impact guard (RIG). The trouble free operation and long-term reliability with 14,500 Kgs. of restraining force.

Loading dock safety is improved with the NO-PINCH auxiliary lock. In addition, the front carriage reinforcement acts as a guard and provides unequalled protection from damage caused by incoming trailers.

The low profile housing automatically adjusts to various trailer heights and movement and lowers to 230 mm above grade, avoiding potential damage from low RIG's. The restraint is stored above ground level, keeping free of dust, ice and debris.

FEATURES

- No-pinch Auxiliary Lock System IP66 Rated Waterproof Motor / Gearbox
- Front carriage reinforcement acts as a guard and provides unequalled protection from damage to the vehicle
- Upward biased housing and hook keep constant contact with rear impact guard
- Solid state control system with diagnostics
- Over 14,500 kg of restraining force and 45,000 kg of mounting force
- Large rotating hook design prevents unscheduled departure, trailer creep and tip over
- Direct drive system eliminates high maintenance clutch, chain and brake components
- Waterproof IP67 rated hook position sensor eliminates failure prone mechanical limit switches
- Fault sensor alarm alerts operator when a missing or damaged rear impact guard is detected
- Above ground storage provides easy dock clean-up and keeps housing clear of dust, ice and debris
- Low-profile housing lowers to 230 mm



OPERATION

As the driver backs the truck into the loading dock, the trailer's RIG makes contact with the restraint housing, automatically positioning the housing under and firmly against the RIG.

With the truck in position, the driver sets the brakes and chocks the wheels. The dock attendant pushes the lock button, activating and positioning the large rotating hook in front of the RIG, safely securing the trailer to the loading dock.

During loading/unloading, the housing automatically adjusts to the trailer's movement while the hook positioning sensor monitors the hook and provides constant upward biased pressure against the RIG, preventing hazards such as trailer creep, early departure and/or tip over.

When no RIG is detected, the hook automatically stores away to avoid damage and goes into fault mode, sounding an alarm to alert the dock attendant. Pushing the override button will silence the alarm while the communication lights indicate a caution condition.

Once the loading cycle is complete, the dock attendant stores the hook by pressing the release button, inside and outside lights then signal the driver and dock attendant when it is safe for the truck to leave.

COMMUNICATION

High-visibility red and green inside and outside LED lights with operator instructions on inside control panel cover and outside mounted sign with clear, large, forward and reverse lettering for drivers.

If power is lost, the inside and outside lights flash to indicate a power loss condition that is maintained until power is restored. An audible alarm and inside red light warns dock attendant when no RIG has been detected.

CONSTRUCTION

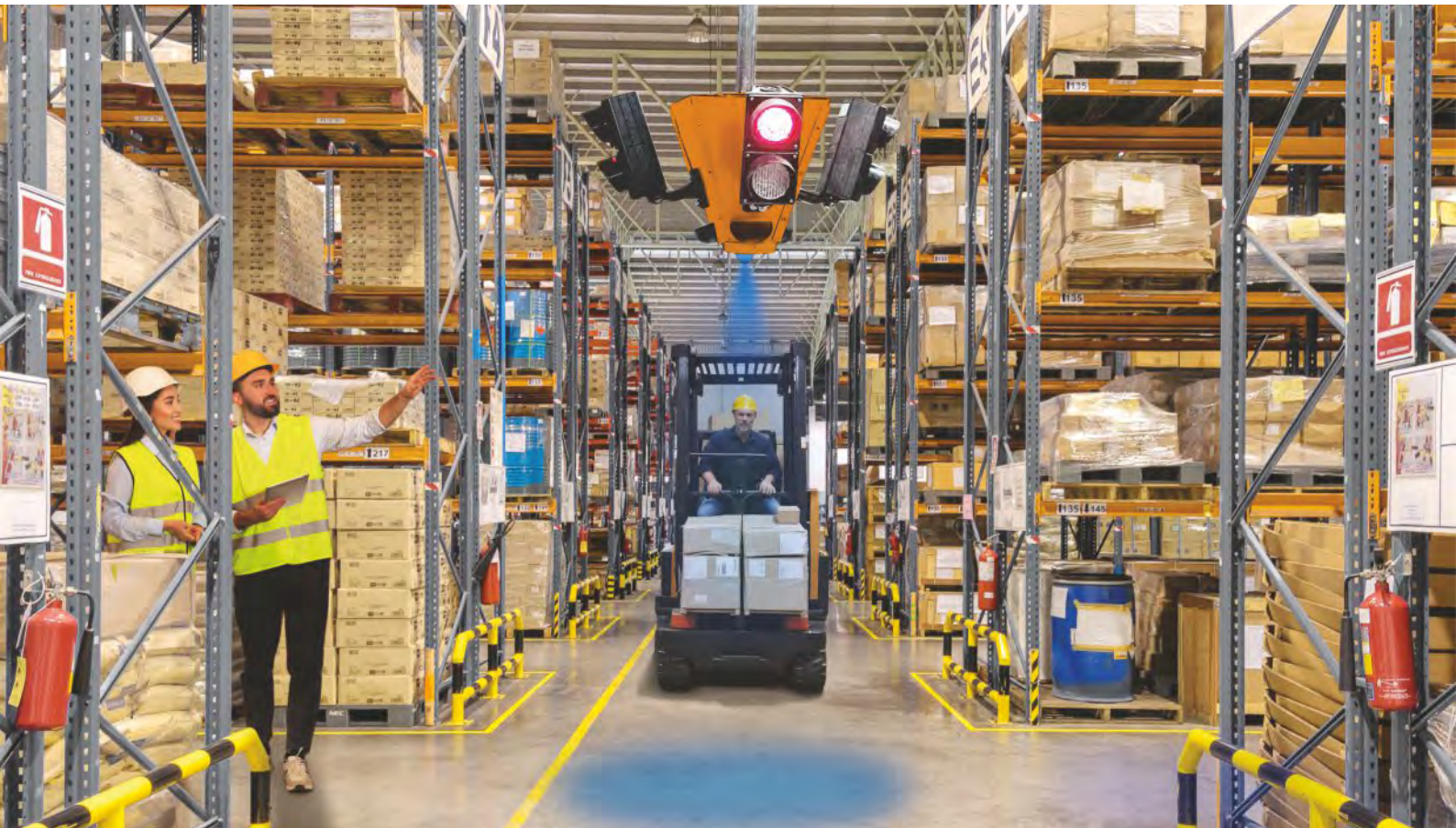
The enclosed housing design is a structural welded assembly constructed with 8 mm thick side plates and 12 mm high tensile reinforcement on leading edge to withstand repeated impacts from backing trailers.

The large rotating hook is constructed of 32 mm thick steel and is attached to the housing using a superior 32 mm diameter shaft. Zinc plated components include mounting plate, track, hook, housing, and brackets. The housing also comes with black and yellow caution markings for improved visibility.

Waterproof IP67 rated hook position sensor for trouble free non-mechanical hook monitoring.

Drive system consists of a direct-coupled IP66 waterproof rated high torque DC motor and high efficiency helical gears.

Dock Signal System



Are you concerned about the safety of your warehouse operations where people and material handling equipment share the same space?

The Gandhi Automations Dock Signal System is your answer to ensuring safety and efficiency in busy warehouse environments. Our advanced traffic control solution features high-clarity LED signs that effectively locate traffic from all directions, providing clear visibility and guidance for drivers and pedestrians alike. This enhanced visibility helps in minimizing the risk of accidents and improving overall safety in your facility.

Additionally, our intersection caution system utilizes adjustable microwave sensors to detect both pedestrian and vehicle traffic within its range. This feature further enhances situational awareness, allowing for timely warnings and alerts to reduce the risk of collisions. With the Dock Signal System, you can create a safer work environment, streamline traffic flow, and minimize potential hazards, ensuring the well-being of your employees and the optimal functioning of your warehouse operations.



Forklift moving from point North towards point South

- In this scenario, the forklift is traveling from the North to the South.
- The traffic light at point North is green, indicating that the forklift has the right of way and can proceed safely.
- At points South, West and East, the traffic lights are red, signaling that vehicles or pedestrians from those directions must stop and yield to the forklift.



Forklift traveling from point West to point East

- Here, the forklift is moving from the West to the East.
- The traffic light at point West is green, allowing the forklift to proceed.
- Meanwhile, the traffic lights at points North, South and East are red, indicating that traffic from those directions must come to a stop and allow the forklift to pass.



Forklift Approaching from North, People from West to East

- In this case, there's a forklift approaching from the North while multiple people are moving from the West to the East.
- The traffic light at point North is green, giving the forklift the right of way.
- However, the traffic lights at points South, West and East are red, requiring vehicles and pedestrians to yield to the forklift and crossing pedestrians.

Adaptable Sensors

Our Dock Signal System is equipped with advanced unidirectional microwave sensors that are designed to detect approaching traffic with exceptional accuracy. These sensors ensure timely warnings and alerts, allowing for quick responses and enhanced safety measures.

Versatile Compatibility

Whether you have a complex four-way intersection, a straight forward three-way setup, or a simple two-way crossing, our Dock Signal System effortlessly adapts to fit your specific layout and requirements. This flexibility ensures that you have a tailored solution that meets the unique needs of your facility.

Customizable Settings

We understand that every facility is unique, and that's why our Dock Signal System offers customizable settings. You can easily adjust the detection zones and sensitivity levels to align with your operational needs, providing a personalized safety solution that fits your facility's requirements perfectly.

Durable Construction

Built to withstand the demanding environments of warehouses, distribution centers, and industrial settings, our Dock Signal System features a rugged steel construction. This durable design ensures long-lasting performance, even in challenging conditions, making it a reliable solution for enhancing safety in your facility.

Energy Efficient

Our Dock Signal System is designed with energy efficiency in mind. With its low power consumption, it not only helps in reducing your facility's energy costs but also minimizes its environmental impact. This sustainable design makes it a cost-effective and eco-friendly choice for your facility.

Adjustable Brightness

Visibility is crucial for safety, especially in busy warehouse environments with varying light conditions. Our Dock Signal System allows you to adjust the light brightness easily, ensuring optimal visibility for drivers and pedestrians at all times. This feature helps in reducing the risk of accidents and enhances overall safety in your facility.





STAR EXPORT HOUSE
(Government of India Recognised)



Gandhi Automations operates a policy of continuous development and reserves the right to make technical modifications / replacements without prior notice.

GANDHI
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