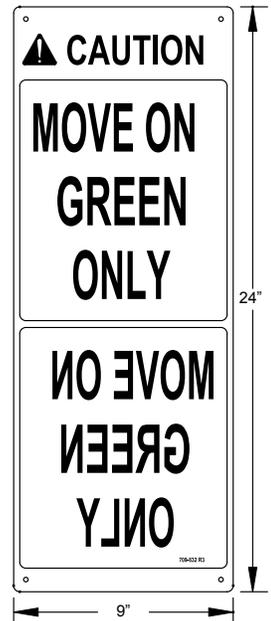


# STAR<sup>®</sup> 4 VEHICLE RESTRAINT SPECIFICATIONS

## Design Highlights

- Non-Impact Design & Operation Push-button Control Panel
- Low Profile
- Horizontal Hooking Range 0 - 10" From Face Of 4" Bumper
- Compatible with NHTSA Regulation Rear Impact Guards
- Automatic Interior/Exterior 24V LED Light Communication System
- Sensor Bar Indicates Positive Engagement with Rear Impact Guard
- Linear Actuator Drive System
- Programmable Logic Controller (PLC)
- Audible Alarm (If no contact with RIG)



## Project Information

Job Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 General Contractor \_\_\_\_\_  
 Distributor \_\_\_\_\_  
 Quantity \_\_\_\_\_

## Certified For Construction

By \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 Date \_\_\_\_\_

## Available Options

- New Construction Mounting Plate
- Lip Limit Switch for Dock Leveler Interconnect
- Keyed Switch Override
- Heater Kit
- Back Plate Cut-Down \_\_\_\_\_
- Other \_\_\_\_\_

## Available Accessories

- Master Control Panel
- Dock Seal / Shelter
- Loading Dock Light
- Guard Rail / Rack Protection
- HV Air Exchange Fan
- Other \_\_\_\_\_



# STAR<sup>®</sup> 4 VEHICLE RESTRAINT SPECIFICATIONS

**1. General:** STAR<sup>®</sup> 4 Vehicle Restraint is designed to engage the rear impact guard of a trailer or vehicle and secure it in place at the loading dock during loading and unloading operations. Unit to include linear actuator drive system, integral sensor bar on the locking unit to indicate contact with the rear impact guard, audible alarm if no contact is made with rear impact guard, control panel with printed operation instructions, exterior-mounted caution sign with forward facing and reversed lettering, and interior and exterior LED light communication system. Unit to provide 32,000 lbs. of restraining force.

**2. Construction:** Mounting frame consists of  $\frac{3}{8}$ " thick heavy structural plate. A separate  $\frac{1}{4}$ " thick steel horizontal mounting plate provides shear strength against pullout loads. Cast ductile iron restraining arm with 45,000 PSI yield strength includes a  $\frac{3}{8}$ " steel rod sensor bar. Restraining arm moves over T-rail, which is welded to mounting plate with over 60" continuous  $\frac{3}{16}$ " bevel weld. Heavy-duty gas spring provides "float" to assure constant contact with rear impact guard. STAR 4 comes standard with zinc-plated finish.

**3. Operation:** Once vehicle is backed into position and the brakes are set, the operator pushes the "HITCH" button to activate the restraining arm, which will move vertically along the reinforced T-rail until it contacts the vehicles rear impact guard. The exterior light changes from green to red when the restraint is activated. The interior light changes from red to green only after the sensor bar on the restraining arm makes contact with the rear impact guard. If the restraining arm does not contact the rear impact guard, the interior light changes to flashing red and an audible alarm sounds. The operator must push the "OVERRIDE" button, which restores the restraint, and then secure the trailer using an alternative method. The exterior light switches to red, and the interior lights will flash red and green to indicate that the vehicle is secured by alternate means. When loading/unloading is complete, the operator pushes the "RELEASE" button on the control panel. The interior light immediately changes to red when the "RELEASE" button is pressed. The exterior light changes to green when the restraining arm has been lowered to its stored position.

**4. Hooking Range:** The restraint will engage a rear impact guard positioned up to 10" horizontally from the face of a 4" bumper, has a vertical hooking range of 11 $\frac{1}{2}$ " x 28". Unit stores at 10" above grade to accommodate low trailers.

**5. Control Panel:** Solid state control panel (9"W x 20"H x 8"D) features a programmable logic controller (PLC) and "real time" diagnostic capability, industrial quality push-buttons, integral 24V LED red and green lights and printed operational instructions. UL listed.

**6. Exterior Lights:** Low profile flashing green and red 24V LED lights (6- $\frac{3}{8}$ "W x 11- $\frac{3}{8}$ "H x 4"D) indicate safe or unsafe conditions for vehicle movement. Caution sign (9"W x 24"H) with standard and reversed lettering provided.

**7. Electrical:** Locking unit and exterior lights operate on 24 volt circuit. Control panel requires 120 volt, single phase, 60 HZ supply. All components are UL listed.

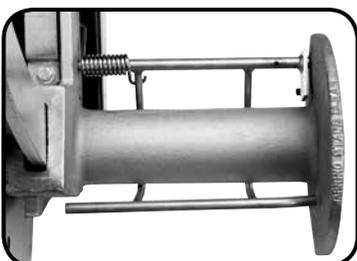
**8. Communications:** Communication system consists of printed operating instructions on the control panel, interior and exterior compact red/green LED lights, and an exterior-mounted caution sign for the vehicle driver.

**9. Installation:** STAR 4 vehicle restraint is anchored to the front wall of the loading dock using concrete anchors (provided). The horizontal mounting plate is anchored to the pit floor under the dock leveler and welded to the mounting frame of the vehicle restraint. Lights, signs and control panel to be installed in accordance with provided instructions. Complete operating and installation instructions are included in the installation and owner's manual.

**10. Limited Warranty:** Kelley warrants all components to be free from defects in material and workmanship, under normal use, for a one year base period from the date of shipment in accordance with Kelley's Standard Warranty Policy. The "Base Warranty Period" will begin on the completion of installation or the sixtieth (60th) day after shipment, whichever is earlier.



Linear Actuator Drive System



Sensor bar Indicates hook contact

