

The Kelley logo is positioned in the upper right quadrant of the image. It consists of the word "KELLEY" in a bold, white, sans-serif font, with a registered trademark symbol (®) to its right. The logo is set against a dark green background that features a repeating diamond plate pattern. The overall image has a green color scheme with a prominent yellow diagonal line running from the top left towards the bottom right.

KELLEY®

VEHICLE RESTRAINTS

EVERY DAY, THOUSANDS OF PEOPLE COUNT ON KELLEY to keep their loading docks safe. That's why we've developed a comprehensive lineup of simple, reliable, low-maintenance safety products, specially designed to prevent loading dock accidents.

WARNING
STAND CLEAR
NO STEP

Don't Compromise On Safety. Count On Kelley.

LOADING DOCK ACCIDENTS CAN HAVE SERIOUS CONSEQUENCES for any company — both in physical injuries and financial obligations. Yet, in many cases, they can be prevented with proper safeguards. Common accidents include:

- Forklifts driving off the dock because a vehicle leaves before loading or unloading is completed.
- Vehicles creeping away from the dock as forklifts continually move in and out during loading or unloading, creating a dangerous gap between the vehicle and the dock.
- Collapse of trailer landing gear due to constant rocking motion of forklifts moving in and out during loading.

Kelley offers a full range of safety products designed to prevent these types of costly accidents.

STAR® VEHICLE RESTRAINTS. **Superior Performance To Satisfy** **OSHA And Your Bottom Line.**

When it comes to restraining vehicles and vehicles during loading and unloading, the Occupational Safety & Health Administration (OSHA) is very clear:

All vehicles must be restrained during loading and unloading*

The responsibility clearly rests with the employer.

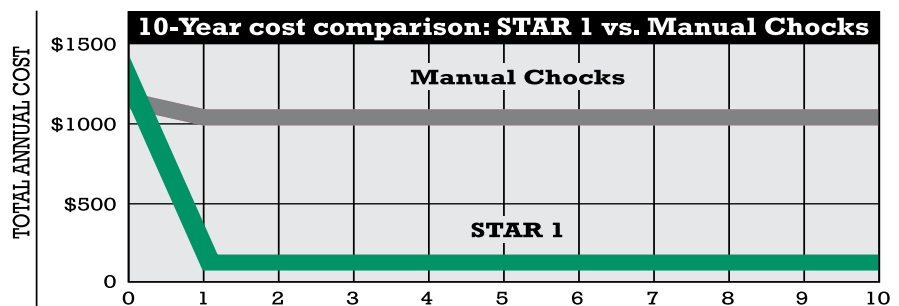
* Requirement 29 CFR 1910.178 (k) (1)

Manual Wheel Chocks Are Not Effective.

Historically, manual rubber wheel chocks were the only things available to hold vehicles at the dock. However, compared to modern restraints, manual wheel chocks are a much less effective restraint method.

- Chocks are easily lost, thus unavailable to use.
- Chocks are hard to position and use properly.
- Chocks slip and slide on gravel, wet pavement, ice and snow.

Not only are chocks less effective than modern restraints, they actually cost more to use than a simple STAR mechanical restraint (see chart).



A STAR®1 vehicle restraint saves almost \$9,000 over 10 years compared to manual chocks. Sure, a STAR restraint requires an initial capital investment, but the labor involved in using wheel chocks costs more every year. If your dock worker labor rate is \$10/hour and you service only five vehicles per day, the STAR 1 vehicle restraint saves about \$900 annually, starting in the second year.

STAR[®] Power: The Benefits.

STAR vehicle restraints are the best performing and least costly restraints to operate.

Here's why:

Non-Impact Operation. All Kelley STAR vehicle restraint models are based on non-impact operation, an advantage that offers many benefits:

- No rear impact guard damage.
- Longer service life.
- Better, more reliable performance.
- Less maintenance.
- Compatible with NHTSA regulation rear impact guards..



Superior Communication. STAR restraints offer positive communication systems to help avoid one of the biggest dock safety problems — poor communication between dock workers and vehicle drivers:

- Exclusive hook-mounted sensor bar senses actual contact between the throat of restraint arm and the vehicle's rear impact guard.
- Standard LED exterior and interior lights.
- Easy-to-see printed signs.
- Audible alarms.

Low Maintenance. The entire line of STAR vehicle restraints is engineered to minimize maintenance requirements and costs:

- No alignment.
- No scheduled adjustments.
- No lubrication.

Simple Design. STAR vehicle restraints exhibit unmatched design simplicity, another advantage with several benefits:

- Fewer moving parts, fewer problems.
- Easier, more reliable operation.
- Reduced training requirements.
- Lower maintenance costs (labor and parts).
- Longer service life.





Manual Operation

- Manual operation is ergonomically friendly and not physically demanding.
- Easy-to-use push bar allows dock worker to engage and release hook from dock level.



STAR 2 Communication System

- Exclusive sensor bar system
- Interior LED light display for dock workers.
- Exterior LED light display for vehicle drivers.
- Caution signs for inside and outside the dock.



STAR 2 Options

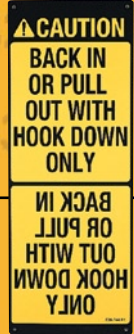
- Stand Off is available for use with Edge-of-Dock levelers or dock bumpers that exceed 4" projection.
- Audible alarm that sounds if restraining arm does not contact rear impact guard; includes push-button reset.





Manually Operated STAR[®] 1.

OUR BASE MODEL, the manually operated STAR 1, offers excellent performance and value and is an economical alternative to the STAR 2.



STAR 1 Communication System

- Caution sign is mounted outside, for vehicle drivers.
- Warning sign is mounted inside, for dock workers.

STAR 1 Options

- Stand Off is available for use with Edge-of-Dock levelers or bumpers that exceed 4" projection.



STAR 1 with TRUK ALERT[®]

- Interior LED compact lights with manual toggle switch and exterior LED compact lights

Manually Operated STAR[®] 2 With Sensor Bar System.

THE STAR 2 IS AN EXCEPTIONAL VALUE offering manual operation plus Kelley's exclusive sensor bar and the industry's most effective communication system:

- Exclusive sensor bar.
- Interior & exterior LED red/green communication lights.
- Simple, manual, non-impact operation.
- 30,000 lbs. of restraining force.
- Works with nearly all styles of rear impact guards and types of dock levelers.
- Low profile - Stores at 9.5" off grade.
- Requires low maintenance.
- Low cost of ownership.

- ① **Durable Latch Lever** is a simple, easy-to-use mechanism that releases the restraining arm when the system is used and holds the arm securely in place when it is in the stored position.
- ② **Rugged Restraining Arm** is made of cast ductile iron with a 45,000 PSI yield strength.
- ③ **Exclusive Sensor Bar** automatically senses the actual contact between the throat of the restraint arm and the vehicle's rear impact guard and communicates status via red/green LED lights.
- ④ **Reliable Industrial Gas Spring** is a heavy-duty, ball-stud-mounted device. It raises the restraining arm to hook the rear impact guard, then "floats" to maintain rear impact guard contact as vehicle height changes.
- ⑤ **Solid Mounting Frame** is 3/8" structural steel plate, secured with concrete anchors. An exclusive separate 1/4" steel shear plate anchors into the dock pit floor.

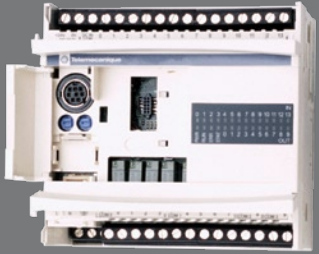


Linear Actuated STAR[®] 4.



Advance wiring board technology

- Significantly saves interior panel space making room for additional options and integration of other dock equipment controls into the same panel.



Programmable Logic Controller (PLC)

- Solid state PLC with advanced "real-time" diagnostic capabilities and coded display system providing operator with information on restraint's status.

THE STAR 4 vehicle restraint offers a higher level of automation and convenience. The restraining arm is raised and lowered automatically at the touch of a button by a linear actuator drive system. The programmable logic controller (PLC) offers more flexibility to meet the evolving needs of your facility. The Kelley STAR 4 vehicle restraint is designed to engage the rear impact guard of a vehicle and hold the vehicle at the loading dock during the loading and unloading process.

- Push-button control panel
- Dependable linear actuator operation
- Programmable logic controller (PLC)
- Non-impact design & operation
- Automatic interior/exterior 24V LED light communication system
- Exclusive sensor bar indicates positive engagement with rear impact guard
- Alarm provides audible alert if sensor bar/rear impact guard contact is not made.
- 30,000 lbs. of restraining force.
- Requires low maintenance.
- Low cost of ownership.
- Low Profile – Stores 9.5" Off Grade
- Horizontal hooking range 0 - 10" from face of 4" bumper
- Captures & complies with NHTSA regulation rear impact guards

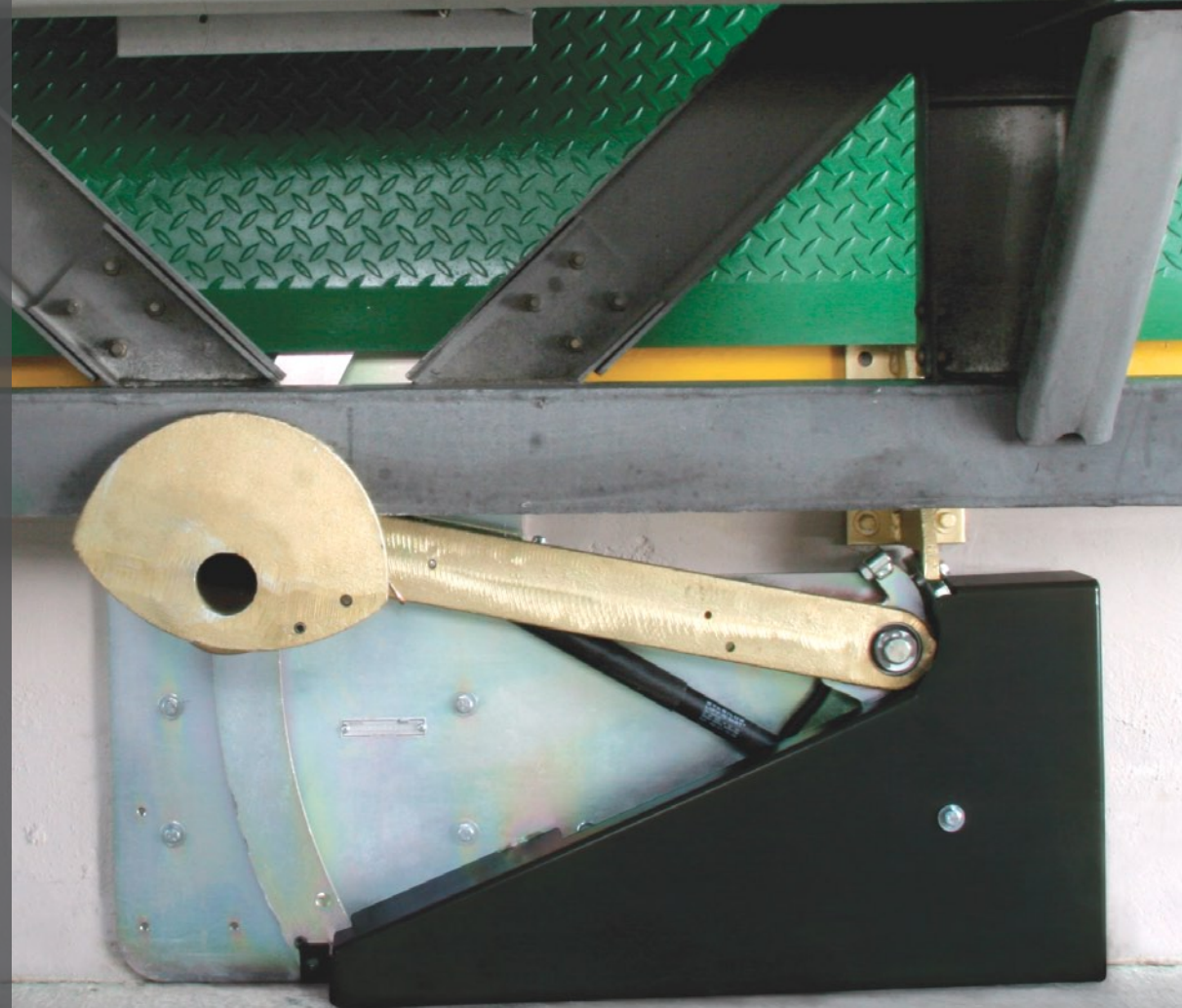


STAR 4 Communication System

- Exterior instruction sign for vehicle drivers.
- Operating instructions printed on control panel.
- Exclusive sensor bar automatically senses and communicates the actual contact between the throat of the restraint arm and the vehicle's rear impact guard.
- Interior & exterior LED red/green communication lights.

STAR 4 Options

- Lip Limit Switch that automatically activates unit when dock leveler lip is extended.
- Key Switch Override for alarm system.
- Stand Off for use with Edge-of-Docks or bumpers that exceed 4" projection.

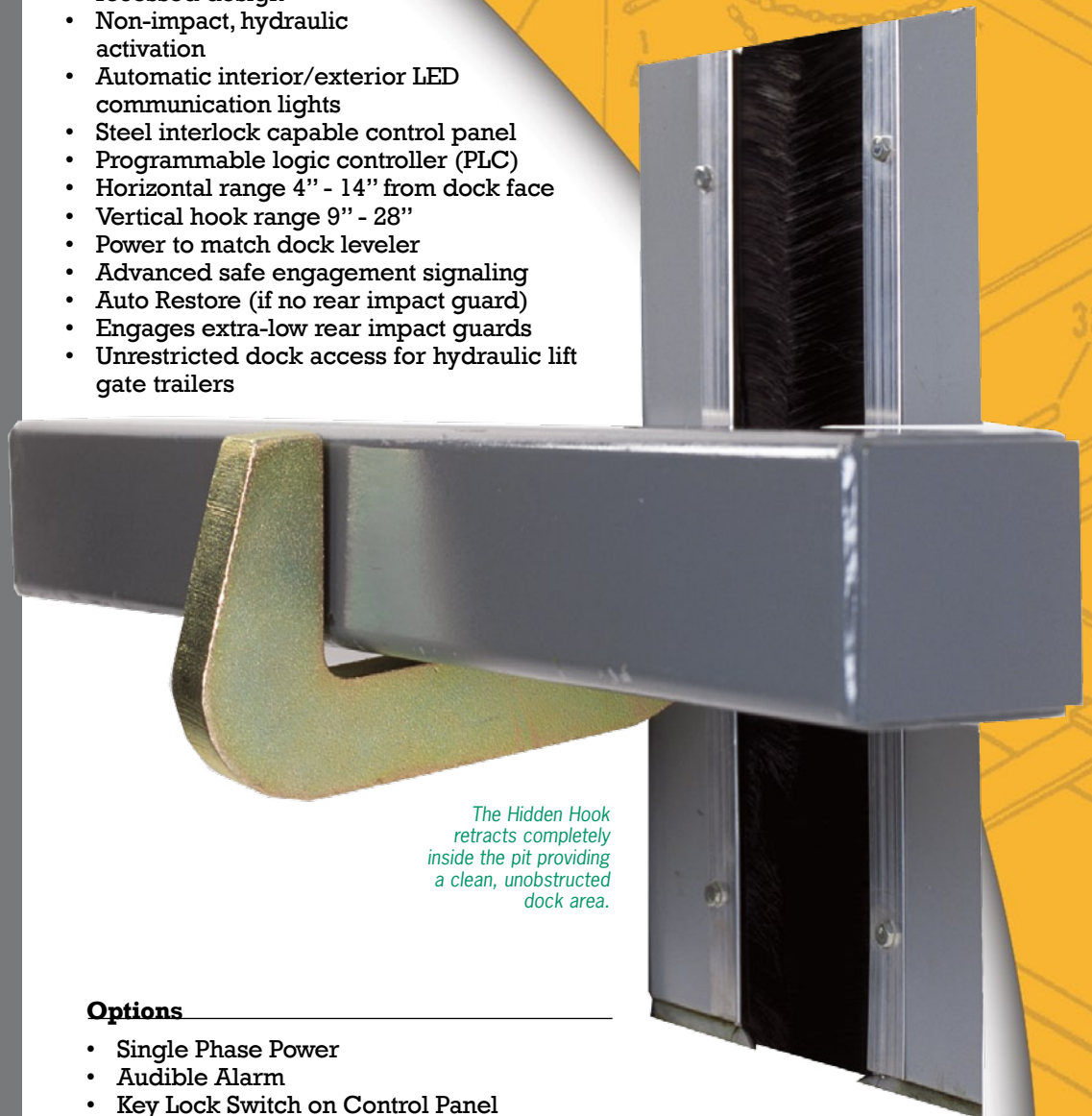


Hydraulically Activated Hidden Hook™

A UNIQUE, NON-IMPACT, RECESSED DESIGN. The Kelley HIDDEN HOOK is a recessed, pit-mounted vehicle restraint that provides a clean, unobstructed dock area when stored and effectively controls vehicle movement by grabbing and holding the rear impact guard throughout the loading and unloading process.

Features.

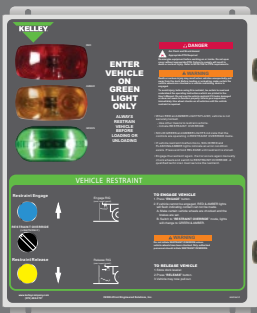
- Pit mounted, recessed design
- Non-impact, hydraulic activation
- Automatic interior/exterior LED communication lights
- Steel interlock capable control panel
- Programmable logic controller (PLC)
- Horizontal range 4" - 14" from dock face
- Vertical hook range 9" - 28"
- Power to match dock leveler
- Advanced safe engagement signaling
- Auto Restore (if no rear impact guard)
- Engages extra-low rear impact guards
- Unrestricted dock access for hydraulic lift gate trailers



The Hidden Hook retracts completely inside the pit providing a clean, unobstructed dock area.

Options

- Single Phase Power
- Audible Alarm
- Key Lock Switch on Control Panel
- Pit Cover



Integrate Your Kelley Equipment For Safer, More Efficient, More Productive Docks.

KELLEY RESTRAINTS

can be integrated with other dock equipment, including dock levelers, dock doors, inflatable seals or shelters, dock lights and security systems — improving productivity, security and environmental control. Kelley's Master Panel dramatically increases safety and operational efficiency by integrating and interlocking equipment controls, ensuring that equipment is always used in proper sequence.



LOADING DOCK SAFETY: Realities & Responsibilities

GLOBALLY, COMPANIES ARE OPTING for a safe, power-activated vehicle restraint like the STAR 4 to reduce unnecessary expenses. However, while the STAR 4 Vehicle Restraint is a great start, it's only one link in the safety chain. A durable dock leveler like the aFX® Air-Powered Dock leveler is another crucial element for a fully protected dock.



KELLEY


DOCK-DEPOT
EQUIPO DE ANDÉN Y PUERTAS INDUSTRIALES

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A continuing research program is in effect at Kelley. We reserve the right to incorporate product improvement at any time without prior notice.