

STR-4000

with Smooth Transition Technology

The original Dok-Lok

- More installations worldwide than any other restraint.
- Over 25 years of proven performance.

Smooth transition technology

- Hydraulic cylinders help stabilize trailer to prevent trailer drop.
- Ensures smooth transition between loading dock and trailer.
- Reduces jolts to forklift operators.
- Minimizes product damage.
- Reduces repairs on dock levelers, seals, shelters, bumpers and forklifts.

Unique design helps prevent all trailer separations

- Aggressive early departure.
- Trailer creep and dock walk.
- Trailer tipover from landing gear collapse.
- Trailer up-ending.

Proven durability for long life

- Stores above ground away from snow, ice, debris and standing water to ensure reliable communication signals.
- Resists damage by backing trailers.
- Zinc-plated for all-weather performance.
- 5-year guarantee on parts and labor.

Simple design, low maintenance

- Fewer moving parts mean high reliability, high uptime for maximum productivity.
- E-Z-Lube™ axle design makes occasional lubrication quick and simple.

Dok-Lok® Vehicle Restraint



A new category of vehicle restraint provides smooth transition technology

The STR-4000 reduces many of the problems associated with unexpected trailer separations, air-ride suspensions, detached trailers, and vertical and horizontal trailer movement.

So it helps you reduce injuries, increase productivity, minimize equipment damage and save money – across your loading docks. And, when used with a Rite-Hite smooth transition dock leveler, the STR-4000 ensures the ultimate in smooth transition technology and performance.

RITE-HITE®

STR-4000

with Smooth Transition Technology



Consider the facts:

- Approximately 24% of U.S. workplace illness and injuries are back related.*
- Back injuries cost U.S. companies an estimated \$80 billion annually.**
- Nearly 9% of all profit dollars are lost to damaged product.***
- Vertical trailer movement due to an unstabilized trailer can cause serious damage to a dock seal, with replacement costs reaching up to \$2,000.

The STR-4000 is designed to help you:

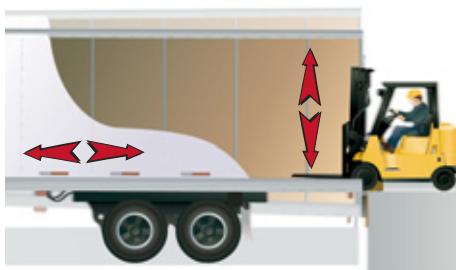
- Improve the safety and comfort of your personnel.
- Keep your product damage to a minimum.
- Extend the life of your loading dock equipment.

Minimize catastrophic and chronic personnel injuries

Each year, catastrophic accidents on the loading dock cost companies millions of dollars. In addition, chronic injuries resulting over time can also be costly.

The STR-4000 is the only restraint available that stabilizes vertical trailer movement to help you:

- Minimize forklift operator fatigue and chronic back and neck injuries from loading or unloading the trailer.
- Reduce expensive catastrophic accidents, and related injuries, costs and lost time.
- Improve personnel comfort – maintain higher loading dock productivity.



Trailer bed height can drop with the weight of a lift truck, which can lead to worker injuries and product and equipment damage. This vertical trailer movement is compounded on trailers equipped with air-ride suspensions.

Reduce the cost of product damage

In any industry, the cost of damaged products or unsaleables is a major expense – and can actually exceed profits.*** Most product damage occurs in the material transfer zone – the area from the loading dock drive approach into and across the shipping/receiving area. As a forklift enters a trailer, fragile loads can be damaged due to trailer drop.

By securely stabilizing horizontal and vertical trailer motion, the STR-4000:

- Ensures a smooth transition between the loading dock and the trailer.
- Significantly reduces trailer drop.
- Helps minimize product damage.



Decrease loading dock equipment repair

Constantly driving forklifts over unstabilized, steeply inclined dock levelers accelerates wear on brakes, tires, transmission, steering axle and other components. Dock seals and shelters worn by the constant rubbing of the rising and falling vertical motion of unstabilized trailers are expensive to repair or replace. And dock leveler repairs and replacements resulting from wear and tear can be costly, too.

The STR-4000:

- Minimizes wear and tear on all of your loading dock equipment including:
 - dock levelers
 - seals and shelters
 - bumpers
 - forklifts
 - walkies
- Saves money by avoiding equipment and maintenance costs, providing a rapid return on your investment.



* Source: The Economics of Spinal Disorders, JW Frymoyer, 1991

** Source: National Safety Council Accident Facts 1997 Edition

*** Source: "Unsaleable Products: 2000 Industry Benchmark Report." Released by Food Distributors International, Food Marketing Institute and the Grocery Manufacturers of America.

SPECIFICATIONS

STR-4000

GENERAL DESCRIPTION:

Solid state STR-4000 Dok-Lok® Vehicle Restraint is designed to secure a semi-trailer to a loading dock by engaging the trailer's Rear Impact Guard (RIG) with a large rotating hook. In addition, the restraint vertically supports the trailer, reducing the vertical motion of the trailer. A spring loaded, structural steel housing automatically positions the unit when contacted by a backing truck. The hook mechanism and support function is controlled from a control panel mounted inside the building.

OPERATION:

As the trailer backs into position, the rear impact guard contacts the spring-loaded structural steel housing. The housing rides down in its track, allowing the rear impact guard to move over the top of the housing. The dock attendant then pushes a control button, which activates the hook and support cylinders to secure the trailer to the dock. The hook provides a holding force in excess of 32,000 lbs (14,515 kg). The STR-4000 maintains constant contact with the rear impact guard and supports the rear of the trailer to prevent vertical trailer movement during loading/unloading operations. After servicing is completed, the dock attendant releases the hook by pressing a release button at the control panel. In the event a trailer is missing, or has a damaged RIG, the DOK-LOK restraint will communicate a fault condition. An audible alarm alerts the operator that the trailer has not been properly secured by the DOK-LOK restraint. At this time, the operator may override the fault condition and secure the trailer by other means. At all times, the light communication system automatically adjusts to the proper operational mode.

CONSTRUCTION:

The enclosed, welded structural steel housing is constructed of 5/16" (8 mm) and 1/4" (6 mm) steel and is designed to receive the impact of trailers backing into position and to support the trailer. The housing protects all components from damage by weather, dirt and debris. The following components are zinc-plated: track, base plate, housing, hook mounting components and track anchors. The large rotating steel hook has a yellow dichromate finish. Standard vertical load rating 22,500 lbs (10,206 kg).

INSTALLATION:

Low-profile DOK-LOK restraint is mounted to a steel plate that is embedded in the dock face or secured by 10 anchor bolts plus 22" (559 mm) of weld to the pit curb angle. Installation does not require modification to the dock leveler. Mounting force is in excess of 100,000 lbs (45,359 kg).

HYDRAULICS:

The carriage is supported with (2) heavy duty 3.5" (89 mm) ID double acting hydraulic cylinders. The hook is positioned with a 1.25" (32 mm) ID double acting cylinder. The unit can be powered with its own hydraulic power unit or operate using the existing hydraulic leveler power unit. Hoses are guarded with hot dipped galvanized coil sleeves. All fittings are JIC or "O" Ring Flange. Hydraulic fluid is bio-degradable.



Pit mounted



Interior wall mounted



Ask your RITE-HITE® Representative for more details on a Planned Maintenance Program.

RITE-HITE® Dock Levelers, DUAL-DOK® Lift/Leveler, DOK-LOK® and WHEEL-LOK™ vehicle restraints and SAFE-T-STRUT™ maintenance support system are covered by one or more of the following U.S. Patents: 4,110,860; 4,146,888; 4,191,503; 4,208,161 (RE 33,242); 4,257,137; 4,264,259; 4,267,748; 4,282,621; 4,286,410; 4,364,137; 4,373,847; 4,379,354; 4,443,150; 4,472,099; 4,531,248; 4,560,315 (RE 32,968); 4,570,277; 4,605,353 (RE 33,154); 4,634,334; 4,692,755; 4,744,121; 4,819,770; 4,843,373; 4,865,507; 4,920,598; 4,995,130; 5,040,258; 5,047,748; 5,111,546; 5,168,267; 5,212,846; 5,271,183; 5,297,921; 5,299,386; 5,311,628; 5,323,503; 5,375,965; 5,440,772; 5,442,825; 5,453,735; 5,531,557; 5,546,623. Other U.S. and foreign patents pending.

RITE-HITE®, DOK-LOK® and HYDRACHEK® are registered trademarks of the RITE-HITE Corporation. SAFE-T-STRUT™ is a trademark of RITE-HITE Corporation. RITE-HITE® reserves the right to make product improvements without prior notice.

ELECTRICAL / CONTROLS:

Universal Restraint Controller provides flexibility for customizing sequence of operation to most requirements. All operator controls are mounted in a gasketed control panel. The control panel is fully operational at all times; does not require key activation; contains solid-state components. Hook mechanism, electric motor and limit switches are totally enclosed in structural steel housing. Electrical components and wiring are UL listed or recognized. STR-4000 DOK-LOK restraint requires a power source of 110/115 volt, single phase, 50 Hz, with a 20 Amp service circuit. The Universal Restraint Controller on the STR-4000 also provides a Self-diagnostic Program, which greatly simplifies trouble-shooting by checking all inputs and outputs.

Please note: Unless specifically noted on quotation, all electrical, including hook-up, is the responsibility of others.

COMMUNICATION SYSTEM:

Outside Communication System: Full-time flashing red or green lights with signs instruct the truck driver when it is safe to back in or pull out.

Low profile light box design helps avoid damage from backing trailers.

Inside Communication System: Full-time flashing red or green lights with signs help the dock attendant know when it is safe to perform loading/unloading operations. The inside lights are in the opposing mode to the outside lights.

Audible Alarm: Inside alarm helps warn the dock attendant when a normal rear impact guard has not been properly engaged. Provides a positive signal in addition to the red light.

Audible Alarm Override: A coded pushbutton control allows authorized personnel to override the audible alarm. When the audible alarm is in override, the inside red and green lights continue to flash simultaneously.

Self-diagnostic Trouble-shooting Program: Input and output indicator monitors the system for instant, one person trouble-shooting, which allows fast, easy maintenance.

WARRANTY:

Five-year parts and labor from date of shipment. All warranties are subject to standard limitations on liability.

OPTIONS:

- LED light system
- Interconnect/interlock modules to optimize sequence of operation to specific needs.
- Combination power unit

