



Enidine Reaching Customers Globally

ITT Enidine provides energy absorption and vibration isolation solutions to meet the challenging demands of heavy industries.

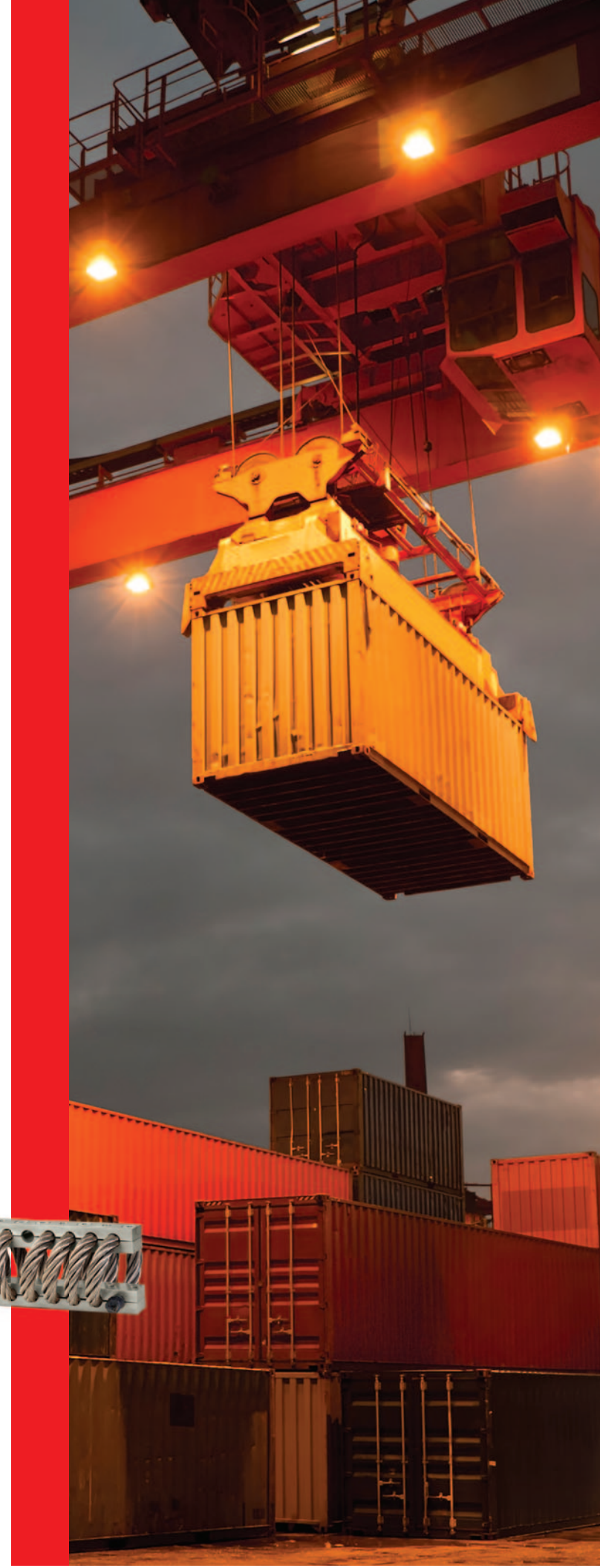
Enidine provides quality energy absorption and vibration isolation products and services to a variety of heavy industries throughout the globe. These industries include; steel and aluminum rolling mills, manufacturers of mill equipment, gantry cranes, ship to shore cranes, overhead bridge crane manufacturers and automated stacker cranes. Enidine is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for growing industrial end-markets in energy infrastructure, electronics, aerospace and transportation.

As part of our strategy to make the customer central to everything we do, our core technologies, engineering strength and global scale offers greater value for customers in terms of quality, cost and delivery.



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Shock and Vibration Solutions for Heavy Industries



Shock and Vibration Isolation for Heavy Industries

Jarret Series Visco-elastic Springs and Bumpers

Jarret visco-elastic fluid shock absorbers and springs have been successfully applied in the steel and aluminum industries for over 40 years. Due to the comprehensive capability of the silicone fluid, the bumpers do not require the need for additional internal gas or mechanical springs to return the piston rod to its original position.

Jarret bumpers also provide reliability, low sensitivity to temperature variances and a high damping co-efficient.

Applications:

- Rolling mill chock separators
- Furnace slab bumpers
- Hot strip mill down-coiler
- Re-heat furnace entry end shock absorber
- Ladle transfer cars
- Transportation end stops
- Tensioning devices



HI Series Heavy Industry Hydraulic Shock Absorbers

ITT Enidine's Heavy Industry (HI) Series buffers safely protect heavy machinery and equipment during the transfer of materials and movement of products. The large-bore, high-capacity buffers are individually designed to decelerate moving loads under various conditions and are in compliance with industry mandated safety standards. These buffers are engineered to conform with OSHA, AISE, CMAA and other safety specifications such as DIN and FEM.

The oversized bore area results in optimal energy absorption capabilities and increased internal safety factors. State-of-the-art testing facilities ensure integrity of design and product performance.

Applications:

- Control of bridge cranes
- Trolley platforms
- Large container transfer
- Transportation safety stops



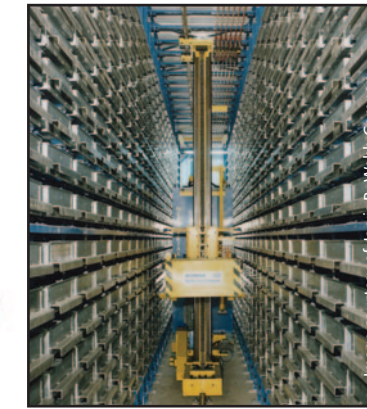
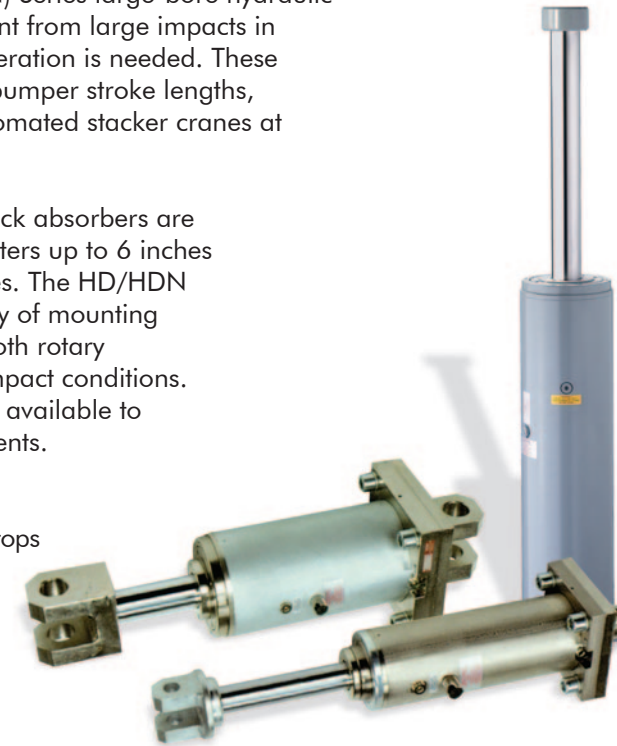
HD/HDN Series Heavy Duty Hydraulic Shock Absorbers

ITT Enidine Heavy Duty (HD/HDN) Series large-bore hydraulic shock absorbers protect equipment from large impacts in applications where "softer" deceleration is needed. These applications also require longer bumper stroke lengths, typically used in decelerating automated stacker cranes at the end of the rail.

Heavy Duty (HD/HDN) Series shock absorbers are available in standard bore diameters up to 6 inches and stroke lengths up to 60 inches. The HD/HDN Series is also available in a variety of mounting configurations that will support both rotary motion applications and linear impact conditions. Optional materials and fluids are available to accommodate extreme environments.

Applications:

- Automated stacker crane safety stops
- Ladle transfer cars
- Coil upenders/downenders
- Large container transfer
- Cab operated bridge cranes
- Ship to shore container cranes



Polyurethane Bumpers High Performance Bumpers

The polyurethane bumper is manufactured of expanded polyurethane resin. The special microcellular structure consists of open and closed cells which is resistant to mechanical wear, oil, grease and gasoline.

This proprietary, anti-aging material is self-extinguishing and offers long service and shelf life. This rugged design is suitable for outdoor use at temperatures from -40°C (-40°F) to +80°C (175°F). A steel safety chain is encased within each bumper and attached to the metallic support.

Applications:

- Trolley bridge cranes
- Portal cranes
- Harbor cranes
- Gantry cranes
- Large container transport



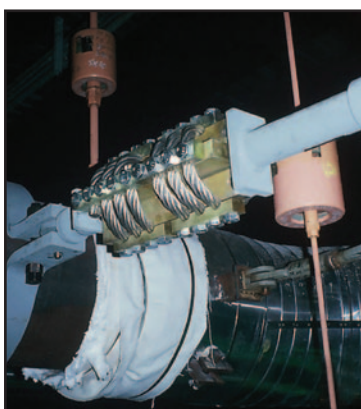
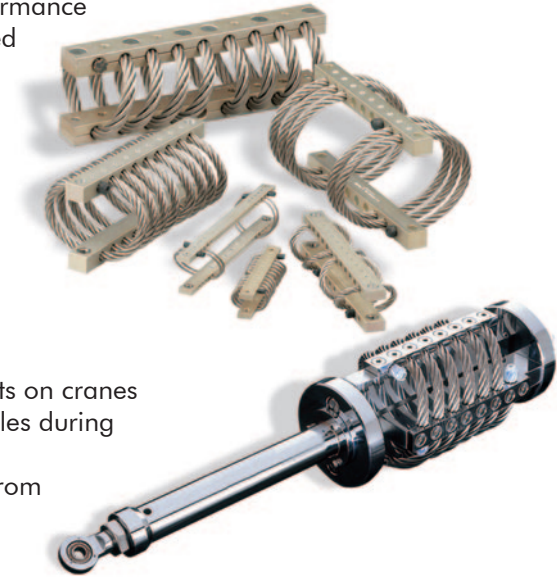
Wire Rope Isolators Shock and Vibration Isolators

ITT Enidine Wire Rope Isolators are comprised of stainless steel stranded cable, threaded through aluminum alloy retaining bars, crimped and mounted for effective vibration isolation. With their corrosion resistant, all-metal construction, ITT Enidine Wire Rope Isolators are environmentally stable, high-performance shock and vibration isolators unaffected by temperature extremes, chemicals, oils, ozone and abrasives.

Individual isolators are capable of supporting loads of up to 3,600 lbs. With proper sizing and selection, these isolators are virtually maintenance free.

Applications:

- Isolation of electronic control cabinets on cranes
- Protection of rolled materials in cradles during loading and transport.
- Protection of piping (pipe restraint) from excessive shock and vibration.



Air Springs Actuation and Vibration Isolation Air Springs

Air Springs use compressed air to provide actuation and vibration isolation. The larger air springs are capable of lifting forces in excess of 100,000 lbs. with the use of only 100 psi. of air supplied to the unit.

As a vibration isolator, air springs provide the lowest natural frequency in the 3-5 Hz range of any available vibration isolator.

Applications:

- Compressor systems
- Conveyor systems
- Press equipment
- Lift Tables
- Large material handling equipment

