

UPENDERS MECHANICAL & HYDRAULIC

Upenders upend coils, molds, dies, paper rolls, cylinders and other heavy bulky loads and turn them within a 90° arc.

Bushman manufactures a complete line of upenders or “tippers”. They are floor-mounted material positioning machines engineered to meet a variety of dimensional, capacity, and application requirements. Upenders are used in production and maintenance applications, and can be furnished with numerous options to suit your needs.

There are two types of upenders, mechanical and hydraulic. Since both are designed to accomplish the same function, the weight and shape of the load will dictate which type is used.



This hydraulic upender is a tilt-test table. E-One, a manufacturer of crash and rescue vehicles, needed to test their vehicles for stability when operating in rough terrain. Maximum lifting capacity of the table is 150,000 pounds and the maximum tilt angle is 40 degrees.

HYDRAULIC UPENDERS

Bushman designs hydraulic upenders with fully integrated, heavy-duty hydraulics for precise positioning. Our hydraulic upenders can handle heavy jobs smoothly and efficiently. They employ one or more double-acting cylinders to rotate the platforms. One platform may be significantly smaller than the other, making these upenders ideal for loads that are not symmetrical, such as long, cylindrical shapes.

The load platform of a hydraulic upender can accommodate a variety of equipment for secondary handling functions including:

- Roll discharge tilt platforms
- Shifting saddles
- Pallet-centering systems
- Load and unload conveyors

Design

- Rugged, heavy-duty welded steel plate, channel and tube construction go into each Bushman hydraulic upender.
- High-quality double-acting tilt cylinders rotate the platforms. They are powered by an industrial duty motor, hydraulic pump, valve system and oil reservoir, all embedded within the unit or packaged for external mounting. Loads rotate around heavy-duty pivot bearings, complete with lubrication points.
- Electrical limit switches halt rotation at each end of the tipping cycle.

Options for Flexibility

- Hydraulic upender platforms can handle a wide variety of load configurations, including long loads such as paper rolls, or other loads whose length is significantly greater than its width or diameter.
- Various types of conveyor decks are available to accommodate specific loads.
- Traveling upenders can be equipped with wheels for rail travel or mobile use.
- Bushman upenders can be modified to work in most systems with automatic operation.
- One platform on a hydraulic upender may be significantly smaller or larger than the other, making these upenders suitable for loads that are larger in one dimension.
- Coil upenders can also handle more than one coil.

Safety Features

- Factory-set pressure relief valves.
- Maintenance lockout pins.
- Guarding and warning labels comply with industry standards.

HYDRAULIC UPENDERS



This Bushman hydraulic paper roll upender is designed to palletize loads of laminated paper or other materials.



This hydraulic upender was designed to upend loads of drywall. The wall is incorporated into the left hand end of the upender to assist the forklift operator in squaring up the load. The loading deck of the load platform has removable fork guides. An electric powered clamping arm secures the stack while tilting.



This hydraulic upender has a powered conveyor and a U-shaped saddle for upending paper rolls.



This hydraulic upender was designed for handling transformers.



This is a custom upender designed to take coils of steel rod from the customer's forklift and lay them down onto a wire mesh pad for transport through the customer's annealing furnace. The unit has two "wings" that are actuated simultaneously to center the coil of steel rod onto the mesh pad on the conveyor section.



This upender has a powered V-saddle and a clearance slot for the C-hook used to place steel coils onto the V-saddle.

MECHANICAL UPENDERS

The Bushman mechanical upender provides an easy and efficient way to upend metal coils, molds, dies and other heavy and bulky loads. Mechanical upenders, sometimes called coil positioners, rotate steel coils and other loads through 90 degrees in either direction. They are used in a variety of production and maintenance applications.

Mechanical upenders have a round cradle frame that is placed on four machined rollers. A gear motor driving a single or dual chain sprocket provides the ability to rotate.

Mechanical upenders are available in standard configurations or may be custom engineered for your particular application.

Standard Design Features

- Frame is made of heavy, welded steel construction. Four or more precision machined steel rollers with sealed bearings support load.
- Brake motor and gear reducer drive a sprocket and roller chain giving a smooth rotating cycle.
- Wired to operate on your available power supply.
- Complete electric controls, disconnect switch, and push button station mounted on unit.
- Limit switches automatically control rotation.
- Standard designs range from 3,000 to 100,000 pounds capacity.
- Custom designs have capacities up to 120 tons (109,090 kg).
- Flat platforms or V-saddles can be included to support coils or cylindrical loads in a horizontal orientation.
- Special platform sizes and shapes are available.
- Pallet centering is available.
- Gravity and powered conveyors allow integration with the production line.

Optional Features Available

- Designs to accommodate special electrical requirements.
- Custom table sizes and configurations.
- The optional 180-degree motorized base rotation eliminates fork truck repositioning.
- Fork pockets for transporting unit by lift truck.
- Roller conveyor on table, powered or gravity controlled.
- Protective covering for table and/or V-saddle.
- Slotted table for coil handling equipment access.
- Horizontal travel drive.
- Built-in lift table.
- Powered, adjustable V-saddle and pallet positioners.



This 100-ton capacity mechanical upender is used to assemble a gas compressor.



200,000 pound capacity mechanical upender mounted in a pit so that platforms will be level with the floor. Upending time is approximately 45 seconds.



This 60,000-pound mechanical upender has gravity roller conveyors on both platforms plus a diagonal locking bar to secure the mold while it is on the conveyor.

MECHANICAL UPENDERS



This 30-ton mechanical upender was designed for a steel mill.



This mechanical upender is equipped with tie-down bars that help secure molds during the upending process. The extra-wide platform of this mechanical upender accommodates larger molds and dies.

USA

Bushman Equipment Inc.
P.O. Box 309
Butler, WI 53007-0309

W133 N4960 Campbell Drive
Menomonee Falls, WI 53051

Phone: (800) 338-7810
(262) 790-4200
Fax: (262) 790-4202



Bushman can design large mechanical upenders according to your specific application requirements. Mechanical upenders are usually shipped fully assembled so that the customer has minimal setup upon delivery.



109-metric ton mechanical upender has a motorized rotating base.

CANADA

Avon Engineering

1680 Brampton Street
Hamilton, ON L8H 3S1

Phone: (800) 844-8117
(905) 689-7994
Fax: (905) 689-8472