



BELOW-THE-HOOK SOLUTIONS

At Bushman, creative engineering leads to innovative products. We move industry in all the right directions for increased productivity and extended performance.

We custom-design and build below-the-hook lifting equipment for both mill duty and industrial applications. Equipment capacity can range from 50 pounds to hundreds of tons.

COIL GRABS



Coil grab features include motorized or manual adjustment, low headroom designs, replaceable wear bars for high duty cycle operation, optical sensors, full length coil sensing flapper assemblies on drop legs, protective padding and rollers, special bail configurations, motorized rotation and built-in weigh scales.

LOAD WEIGHING SOLUTIONS

Electronic load cells that provide immediate, accurate and repeatable weight data are available on Bushman bottom blocks, coil lifters, c-hooks and upenders. Load weighing equipment expands usable floor space and lowers the possibility of product damage. It also increases throughput by reducing material handling time up to 50 percent.



C-HOOKS

C-hooks are available in capacities from 50 pounds to 75 tons. Features include:

- Coil edge protection.
- Integrated weigh systems.
- Special bail configurations.
- Low head room and high temperature designs.
- Padded or coated surfaces.
- Motorized rotation.
- Unique leg configurations.
- Storage stands.



LADLE HOOKS AND BEAMS



Ladle beams with ladle hooks or J-hooks are used to transport a ladle and allow the ladle to be rotated. Features include:

- Laminated, riveted and welded steel hooks.
- Hardened steel pins
- Forged steel or fabricated chase blocks.
- Removable wear strips and bronze bushings.



Solving Material Handling Problems

Below-The-Hook ♦ Floor Based
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VERTICAL RIM COIL GRABS



Vertical rim coil lifters lift coils in the eye-vertical position to permit stacking for heat treating processes. Vertical rim coil grabs are available for single rim and double rim applications.

MAGNET BEAMS



Magnet beams feature twin bail pick-up, fixed length or motorized telescopic Tri-Beam, and hardened steel bushings at magnet attachment points. Beams are available with built-in storage stands.

ROTATING AXIS GRABS



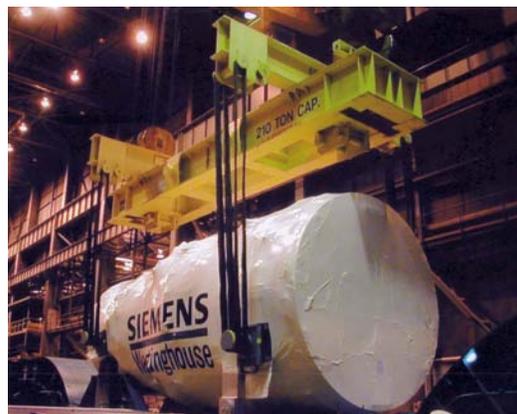
Rotating axis grabs grip the outside of a load and rotate it to the proper position. They are ideal for applications involving loads that are packaged or banded. They can be operated manually or powered by an electric or air motor.

CLAMSHELL BUCKETS



Clamshell Buckets are a cost effective, low maintenance tool for picking up and moving granular products. Clamshell buckets are strong and rugged so they can be used safely in water and in extremely harsh conditions.

SPREADER BEAMS



This 230-ton capacity beam lifts a \$21 million dollar turbine. The beam is custom designed to pick up engines with various configurations.

SHEET LIFTERS



Sheet lifters feature hand wheels, chain wheels and motorized leg travel. They can be equipped with low profile designs; end hooks; load weighing systems; and self-locking leg designs that prevent opening under load.

HOOK BLOCKS



Hook blocks are available from stand-by to mill duty service. They are specially designed for applications in which material positioning is critical, higher capacities and/or heavy-duty cycles are required, or when the load must be moved to or from inaccessible locations. Available features include multiple sheave configurations; varying rotation speeds; special hooks and pin-type bail designs; built-in weigh scales with scoreboards and printers; air, variable frequency or DC drives; and remote controls.

LIFTING TONGS



Bushman designs and manufactures a complete line of tongs for lifting and moving industrial loads with capacities from 50 pounds to 100 tons. Tongs are custom designed to suit your applications including work rolls, billets, slabs, pipes, bar stock, concrete, etc. at high or low temperatures.

PALLET LIFTERS



Bushman pallet lifters are available in capacities from 500 pounds to 20 tons. Pallet lifter features include:

- Low headroom designs.
- Fixed or adjustable forks.
- Motorized adjustable forks.
- Multiple fork configurations for long loads.

JIB AND GANTRY CRANES



The Super Jib shown here is a full cantilevered jib with a 60-foot span and a capacity of 7 ½ tons. It is mounted onto a large gantry crane at a nuclear power plant in California.

Bushman builds both custom and standard jib and gantry cranes. Available features include:

- Heavy and light duty designs.
- Floor, column or floor to ceiling mountings.
- Motorized and hand-gear rotation.
- Outdoor service.

CUSTOM LIFTERS



Bloom and billet handlers

Custom built spreader beam with power rotation and adjustable C-Hooks to suit various lengths of continuously cast blooms or billets.



Electrode grab

A steel producer needed a faster way remove electrodes from the furnace. This motorized grab can be lowered into the furnace to grab the plate regardless of the temperature. The electrode can now be changed in an hour, without human intervention.



5 Coil Lifters-1 Spreader Beam

These five coils can be moved at one time by this large spreader beam/coil grab.



Eye to the sky

Motorized telescoping pallet lifter handles eye-to-the-sky coils on pallets.



Special Lifting Equipment

Fifty-ton motorized lifter handles dies with varying length and width. The lifter includes sensors for use on a semi-automated crane.



Ring Lifter

This lift was designed to lift forged rings into and out of a row of vertical turret lathes. Previously the rings were lifted manually with chains. Now the crane operator can insert and remove the rings in a fraction of the time with less risk to the operator and the ring

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