# RILEY

# **BUCKET ELEVATORS**

## Looking for strength and durability to ally your system?

Riley trunking flanges are welded solid inside and outside. Ask about powder coating for additional durability.

## Is smooth installation at the top of your priority list?

Keep your millwrights happy; all Riley trunking components are fixture welded to ensure quick and easy construction in the field.

## Want to keep your belts running smooth with proper tension?

Riley's gravity take-up boots are offeredin 18", 24" and 30" pulleys as well as 36", 42" and 48" (which are the only three the competition offers).

## Need an upgrade to keep your service guys off the platform?

No charge here! Riley bucket elevators are all equipped with pillow block bearings for best efficiency, longest life and maximum radial loads.

#### Safety a priority for you?

Riley head platforms wrap around the front of the head, giving ample clearance for service and inspection.

#### Need reliable support?

Our technical team is available 24/7 during peak season. High quality equipment and service is our standard.



Riley Equipment's bucket elevator line is designed with the user in mind—commercial and farm-duty are available in painted, powder coated, galvanized or stainless steel finish. Built for easy seasonal maintenance, standard items are in place for safety precautions, and each weld is quality checked for optimal performance.

We arm our equipment with the highest quality buckets in the industry— assuring performance and satisfaction. The Riley design offers 4' tall removable doors on both sides of the up casing for quick installation and maintenance of belting and buckets. Large, conveniently placed access doors provide seamless inspection and service. Access doors are located at the boot, discharge and pulley lagging area. A safety cable is standard on all head access doors.

Heavy-duty motor mounts with torque arm anchorage points are standard on all Riley bucket elevators. UHMW shaft seals are also standard, keeping moisture out and dust in. Industry-best hardware and craftsmanship keeps our equipment performing at optimal levels for years on end.

Riley offers standard bucket elevators up to 60,000 bph, and custom sizes are available to meet your specific need.



#### **Main Bucket Elevator Features:**

- Elevators can be built of stainless steel, galvanized steel, painted steel or powder coat finish.
- Shaft made of #1045, turned, ground and polished steel. Boot shafts are drilled and tapped for optional motion monitor.
- Main head assembly has a 1/2" lip above the frame to provide a dust tight and weatherproof seal. Split removable bonnet for easy access.
- All head and boot bearings are factory installed pillow block bearing selected for best efficiency, longest life and maximum radial loads—torqued to proper specifications.
- Adjustable throat baffle for maximum discharge. Discharge spout can be furnished horizontal or on a 45° incline.
- Wear points are lined in the head section.
   Liner is available in urethane, ceramic or ceramic chipped urethane.
- Dust tight and weather proof shaft seals.
- Belting can be furnished in PVC or rubber.
- Trunking end flanges are continuously welded in a fixture to assure square and parallel trunking for easy field assembly.
- Designed so the trunking has adequate column strength for a "free standing" installation (guy cables or other lateral supports are required at 20'-0" max. intervals).
- Inspection and maintenance ports have gasket seals.
- Screw take-up is standard in the boot section. External gravity take-up is optional.
- Inlet hopper is standard on "up-side" of elevator.
- Many other options available: service platforms, ladders, safety cage, guy brackets and explosion relief vents.

Riley offers nine series of bucket elevators, each with several configurations, to match your facility requirements. Customization is available to meet your specific needs if they are not listed below:

Series	BPH	CFH	TPH	MTPH	Pulley RPM	Belt FPM
Mercury	1350	1688	40	37	113	326
Pluto	2650	3313	79	72	95	448
Mars	3000	3750	90	82	77	482
Venus	3500	4375	105	95	65	510
Neptune	4750	5938	142	129	65	510
Saturn	8500	10625	210	190	64	603
*Jupiter	15575	19475	472	729	60	660
*Galaxy S	14600	18170	442	401	56	711
*Galaxy SX	29200	36340	884	802	56	711

<sup>\*</sup> Multi-row buckets available. Capacities up to 60K standard, build to suit up to 80K

## LADDER AND SAFETY CAGE

Ladder and safety cage include necessary brackets and hardware for mounting. All ladders include a 13'-9" section for entrance into the head platform. When using an intermediate rest platform, reduce the amount of safety cage required by 10'-0 for each platform. Each safety cage package includes an entrance cage x 2'-0 long at the start and at each rest platform.

### **OPTIONAL ACCESSORIES**

**Dura-Splice** Durable Belt Fastener with "one size fits all" belts and pulleys. Each splice set joins a 2" wide belt area.

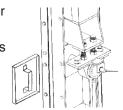


Eleva releas panel Eleva

**Elevator Head and Legging Explosion Relief Panels** Relief panels release pressure from possible explosion. Safety cable prevents panel from falling. Each set includes four relief panels.

**Elevator Belt Speed Monitor** The speed monitor mounts to the elevator boot shaft to detect

slowdown in belt speed, indicating a plug situation. An alarm is sounded and/or the leg is shut down automatically. Available in Single Set Point and Dual Set Point, both in dust-tight and explosion proof models, less control cable and alarms.



**Bucket Attachment Hardware** #1 Norway Elevator bucket bolts with nuts are sold (100) in 1" through 2" long, standard and fanged variety. 1/4" and 5/16" Lock Washers, Flat Washers and Hex Nuts are available.

**Elevator Boot Hopper Magnet** High intensity magnet is mounted in elevator boot hopper to remove tramp metal. Quick release clamps are used for easy cleaning.

#### **Elevator Belting**

PVC belting is available from stock for widths of 7", 10", 11", 13" and 14". Other widths of PVC as well as rubber belts are available.

#### **Elevator Buckets**

Elevator buckets are available in polyethylene and steel. Specifications required are length, width, number and spacing of holes and hole size.





#### **Urethane Sheet**

High quality urethane sheet is stocked in 4 Ft. x 10 Ft. x 1/4" thickness with expanded metal backing. Variety includes: 1/4" Expanded Metal Backed Urethane and 1/4" Ceramic Chipped Urethane.

#### **Motors**

Motors up to 150 HP are available from stock. Motors are 1725-1800 RPM 60 Hz. and 1450 RPM 50 Hz, three phase. Enclosures are TEFC or Explosion Proof, Class II, Group G.

#### **Boot Shovel Pocket**

A boot shovel pocket is available on most bucket elevators. The shovel pocket has a hinged cover and a grate over the opening. The shovel pocket is located on the down leg side.

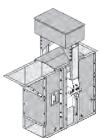


#### **Pulleys**

Replacement elevator and conveyor pulleys are available in various types of construction; single disc, drum and winged. Specifications required are diameter, face width, shaft size, and crowned or flat face.

#### **Pulley Lagging**

Heavy-duty slide lagging (SOF Style 5) slides into retainers which are welded onto the pulley. Replacement lagging is available in 6 Ft. long strips with retainers.



#### **Gravity Take-Up Boot**

Gravity take-up for automatic belt tension is available on the Pluto series through the Jupiter series bucket elevators; and standard on all Galaxy models. Included is a weight box and alignment bolts for tracking the elevator belt.

#### **Self Cleaning Boot**

Gravity take-up for automatic belt tension. Self cleaning style holds close clearance between boot bottom and cups at all times. Winged style pulley with shaft mounted on pillow block bearings.



#### **Bucket Elevator Machinery Arm**

The machinery arm mounts to the head platform.

Riley bucket elevators are equipped with head, boot, inspection section, legging, assembly bolts, inlet hopper, motor mount (less motor and drive), PVC belting, polyethylene buckets, and bucket bolts.

All shaft mounted drives consist of: Shaft-mounted Class II reducer with bushings, sheaves and bushings, drive belts (2.0 safety factor), and belt guard.

Bucket elevators are available in galvanized, painted black iron, and stainless steel construction.

Legging type of construction is illustrated below.



For standard galvanized construction: STYLE 1 - Includes all 14 gauge galvanized standard legging for Mercury through Saturn models.

STYLE 2 - Includes all 12 ga. galvanized legging for Pluto through Saturn models.

STYLE 3 - Includes all 12 ga. galvanized legging for Jupiter through Galaxy 15 models.

STYLE 4 - Includes all 12 ga. galvanized standard legging for Galaxy 20 through Galaxy 29 models.

STYLE 5 - is used for welded construction. A fillet weld is used rather than a butt weld for extra strength. For some models weld seams may be on the same side of the legging rather than opposite corners as illustrated.





Experience a new standard of quality and service with Riley Equipment, a preferred designer and manufacturer of processing machinery and bulk material handling equipment for agriculture and a wide variety of industrial markets.

This is next-level design and fabrication of customized equipment to meet our customers'

very specific requirements, in addition to a robust

standard equipment line. We manufacture all products in-house under stringent quality controls to ensure proper alignment and fit in the field.



Riley
Equipment,
a division of LeMar Industries, offers
a complete line of bucket elevators,
distributors, spouting and accessories, drag
conveyors and screw conveyors.

LeMar Industries is an agricultural as well as sand & gravel design and manufacturing operation providing: support towers, catwalks, temporary storage, transport

conveyors, bulk weighers, drive over conveyors, open belt conveyors, grain reclaim service and super structures along with specialty fabricated

equipment. The LeMar Industries family of companies also includes Hall Industries, a cutting-edge design and metal fabrication shop, and Midwest Bearing, a leading bearing and power transmission aftermarket supply house.



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