



Truck Dumpers



Our History

Phelps Industries, Inc. was organized in 1927 and was a pioneer in the pneumatic unloading and conveying of bulk material from trucks. These many years of manufacturing have led us into several new fields, from pneumatics and custom fabrication, to truck dumps, hydraulic cylinders, and live floor hoppers. Our years of experience in design, development and manufacturing assure you of the finest products at competitive prices. Our goals are clear.

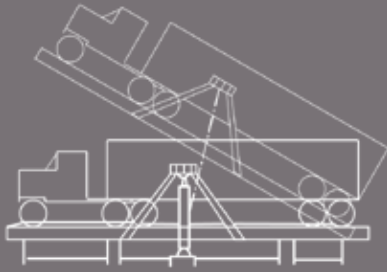
Quality. Service, and Dependability.

Phelps Hydraulic Truck Dumpers are designed to meet the most rigid standards of the bulk unloading industry. Our broad line will provide a unit to suit your site and application.



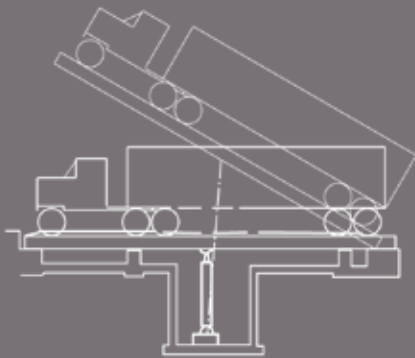
Engineered for strength, safety and dependability to meet the requirements of today's bulk industry needs.

“A-Frame” Cylinder Mounting (Pit-less)



The “A-Frame” model is designed and built for above ground installation. This type of truck dumper is very desirable in areas with a high-water table or locations where the soil does not allow the digging of a cylinder pit. The “A-Frame” arrangement allows for easy access to the deck cylinders.

Under Deck Cylinder Mounting (Pit Type)



This model is sometimes preferred when the water table permits, and the cost of excavating a cylinder pit is not prohibitive. It leaves clean lines (flush with the ground) when in the down position.

Assembly And Installation

Assembly of your Phelps dumper is done for you in our plant. The deck is shipped as a complete weldment with back-stop or wheel chocks installed.

Only the “A-Frame” and “Yoke” dumpers require some field assembly. No field welding is required on pit type units. Phelps dumpers are shipped to the job site on flatbed trailers and are ready to unload from truck to foundation; thus, installation is simple, and costs are kept to a minimum.

Cylinders

Phelps telescopic hydraulic cylinders are the heart of our dumpers. They are designed, manufactured, and warranted by Phelps Industries. Each cylinder is engineered for each specific truck dumper application. Some insights into our design are increased lap between stages for strength and a wider bearing for long life. All our steel tubes are machined through our CNC machines.

Power Unit

The shock resistant hydraulic circuit used on Phelps dumpers provides smooth start and stop when raising and lowering the platform. The circuit cuts heat build-up and prevents leaks in the line caused by shock.

All power units are equipped with totally enclosed fan-cooled motors in sizes to match the application. Hydraulic components are carefully matched to the rest of the system.



The Deck

Here our main goal is strength and rigidity. The deck is built with two heavy steel wide flange beams running the full length. These beams are also parallel to the wheels on the trucks and trailers driving onto the deck. In this location the beam take the maximum load. Steel safety plate is welded to the top of the wide flange beams and cross members. Mild steel plates are welded to the underside of the unmaking a box section for maximum rigidity and strength. The entire deck is welded together in the plant and shipped in one piece.

Models

The available models are determined by the dumper length and the tilt angle. Our standard lengths are: 35', 40', 45', 60', 65', 70', and 75' which in dictates the amount of usable deck. Angles of tilt to dump specific products vary, therefore, we have four standard degrees of tilt: 36°, 45°, 55° and 63°. These dumper models involve three types of installation, permanent placement, semi-portable, and fully portable units.



Wheel Chocks

36° and 45° dumpers are available with hydraulically operated wheel chocks. The trailer tires rest against the raised chock to keep the truck on the platform during the dumping operation. These chocks are carefully engineered and heavily constructed to retain the load against them and to compensate for any misalignment of the truck on the platform.

Wheel Guides

Wheel Guides are an integral component to every Phelps truck dumper which is used to safely guide the truck on and off of the dumper. The wheel guides are formed from steel and fully welded to the driving surface of the dumper.



Backstops

The backstop is a reinforced structural member of the truck dumper that supports the trailer bumper and is designed to withstand the weight of the fully loaded truck. Backstops are used when the tilt angle is too great for wheel chocks. There are several types of backstops depending on the application such as fixed height, adjustable height and drive-through backstops. In some applications vibrators can be added to the backstop to aid in material unloading.



Raised Pivot Dumper

The raised pivot dumper has its pivot point located at the near upper corner of the back-stop bar. This allows a hopper or conveyor to be placed against the dumper, with only the trailer rotating over the hopper or conveyor. This also provides for a shallow receiving hopper to be installed completely above grade or to be installed with considerable reduction in excavation.

For some products, a cross-feed conveyor can be mounted to the raised pivot dumper, completely eliminating the need for a receiving hopper. Material flow to the conveyor is regulated through the use of a metering gate attachment.

The raised pivot dumper is available as a back-on type in all standard lengths and tilt angles. It is also ideal for applications where excavation is a problem or where a carefully metered flow is desirable.



Hoppers

Several standard live bottom receiving hoppers are available in a variety of holding capacities and discharge rates. All hoppers are available for handling wood chips, bark, wood waste, and other bulk materials, such as, produce, scrap tires, and solid waste. Mechanical and hydraulic drives operate a choice of drag chain or reciprocating floors.

The hopper walls are fabricated of 1/4" mild steel

plate. The carrying floor is 1/4" AR plate over 1/4" A36 plate. Return floor is 10 gauge.

Six strands of WD480 Drag Chain are used for conveying the material out of the hopper. These six strands provide full coverage of the bin floor.

The hopper is fabricated in the largest pieces possible for shipping and with match marked welding clips attached.

Our standard 4400 cubic foot

Hopper is designed to convey wood chips, bark, sawdust and shavings at a nominal 150 tons per hour, 24 hours per day, 7 days per week. Reciprocating floors are made of aluminum. Hoppers are designed with the customer's usage in mind. Hopper classification is determined by the application and duty cycle required.



Phelps Backrake

Biomass facilities that purchase bark, hogged wood fuel, and unscreened wood chips deal with the inherent problem of these material not metering well or simply not clearing at all from standard truck dump hoppers. This is due to the fact that raw materials have become less processed, due to cost. Bridging, clogging, or bottlenecking at the hopper metering gate, belt conveyors or screens of oversize and/or stringy woody biomass is inevitable. A Backrake manufactured by Phelps Industries breaks up clumps of this type material for a more consistent discharge rate and without the choke-ups on the material handling system.

The Backrake is a vertically oriented, upward traveling chain of spiked slats located at the discharge end of the truck dumper hopper. Biomass is moved toward the hopper discharge opening by drag chains on the hopper floor. This forces the biomass against the Backrake. A lifting and tumbling action of the biomass is created by the interface of the forward traveling drag chain and upward moving Backrake. This continually breaks up the clumps of larger and stringier material allowing the smaller, broken pieces to move through the material handling system.

The hopper discharge flow rate is determined by the size of the opening between the hopper drag chains and the Backrake, and also by the speed of the hopper drag chains creating a system that is very versatile to match well with the downstream conveying system.



Yokes (Extended Arm Dumpers)

Ordinarily, yoke dumpers are used to dump into above-ground live bottom hoppers for feeding to mill or storage. Phelps will engineer a yoke dumper to fit your existing hopper or furnish a complete dumper and hopper package.

Reclaim Conveyors

Phelps Drag Chain Reclaim Conveyors are offered in three different models; Cross feed, Under pile, and Loading. Cross-feed Reclaimers are used as take-away conveyors from our receiving hoppers. Under pile Reclaimers are used to take-away wood chips from piles created by a woodyard stacker. A Loading Reclaimer is fed material by a front-end loader; this material then can be conveyed to another destination.

Dust Abatement

Phelps offers options for dust abatement and collection on our extended arm truck dumpers and above-grade hoppers. Contact Phelps for more information.



Portable Models

We offer a full line of portable models available in different styles and sizes for a variety of applications and material.

Portable units equipped with axles, wheels and tires, allow for actual transport of the complete tipper solely on its own with only the use of a truck, dozer or other vehicle capable of connecting to the unit and having adequate towing capacity. This feature allows for applications with continuous and regular needs of relocation. Our fully portable units are offered in different styles. Standard elevated units utilize an extended approach ramp. The low profile tipper design uses two (2) single, short approach ramps of applications with limited space or where an extended approach ramp is not practical.

A semi-portable unit designed to be moved with less frequency utilizes a sub-frame only, with the dumper sitting directly onto a flat surface. This unit is portable in that it is fully capable of being moved, yet must be lifted onto a flatbed trailer for transport. These portable units are also offered in both the standard and low-profile types which utilizes a single, shortened approach ramp. The low-profile style portable unit may also be used in combination with a live floor hopper. All portable units are equipped with either electric power units or diesel operated self-contained power package.



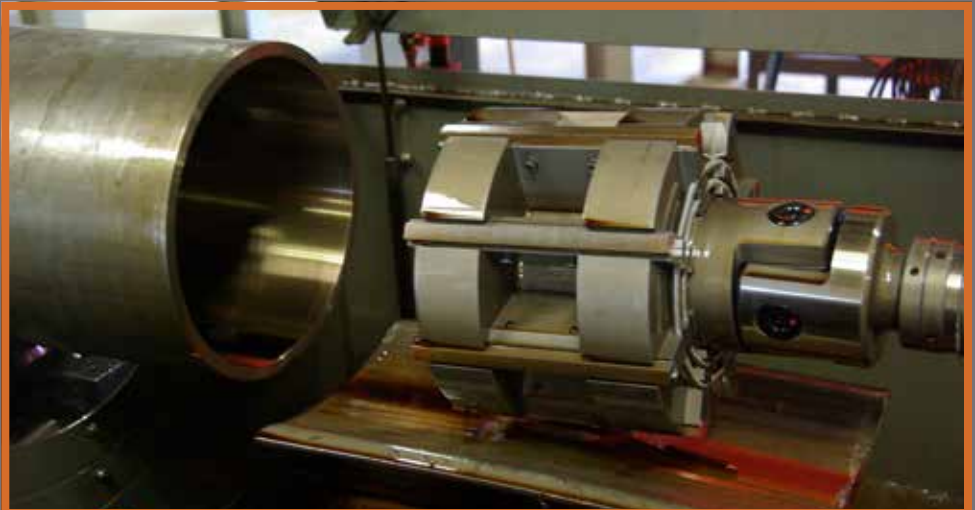
Cylinders

In 1980, Phelps Industries started manufacturing our own cylinders because at the time cylinders that were commercially available did not meet the demands of a truck dumper. We needed cylinders that were engineered specifically for truck dumper service and built with the highest craftsmanship for long life.

Phelps cylinders are manufactured at our Little Rock, Arkansas facility. All cylinders meet the highest quality standards including chrome plating, 1026 DOM tubing, fully welded construction, extra wide bronze bearings, minimal tolerances and a generous lap between stages. In addition to wide bearings, glass reinforced nylon wear bands are also incorporated on some cylinders as an additional internal wearing surface. These features result in cylinders that are incredibly rigid with less 'break-over-angle', and have a long wear life.

Phelps also offers remanufacturing for our cylinders with savings of more than 50% than a new cylinder. Our remanufacturing process can double and sometimes triple the life of a cylinder, resulting in more savings for the customer. The remanufacturing process also allows us to continuously improve upon our cylinder design.

In our Little Rock facility we utilize the latest manufacturing technology including CNC lathes, CNC hones and semi-automated welding. Before shipping, each cylinder undergoes a thorough evaluation process including a full extension of the cylinder and a pressure test to ensure every cylinder meets the customer's expectations. Cylinders are the working force behind the truck dumper and after 35 years of manufacturing cylinders for truck dumpers we build the best cylinder in the industry.

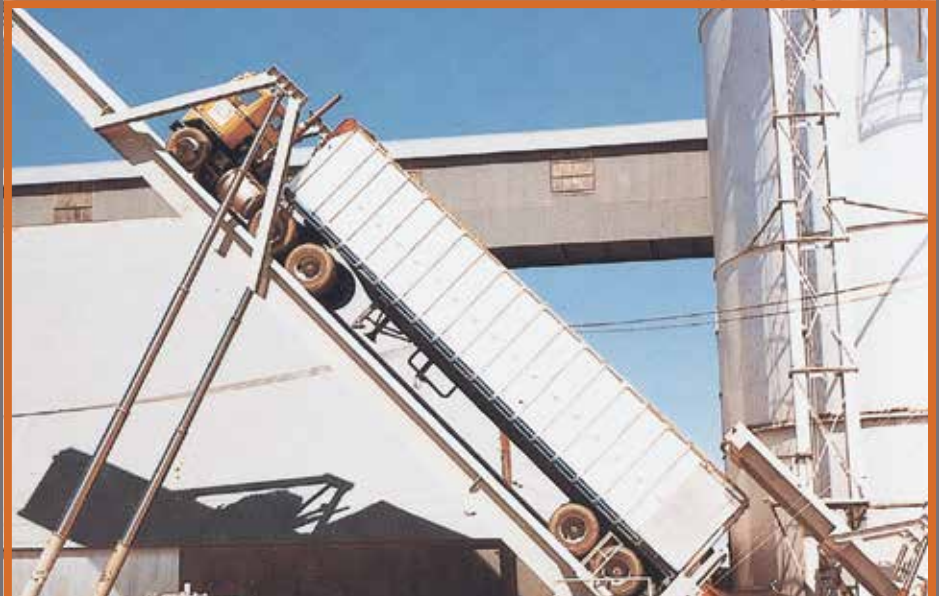
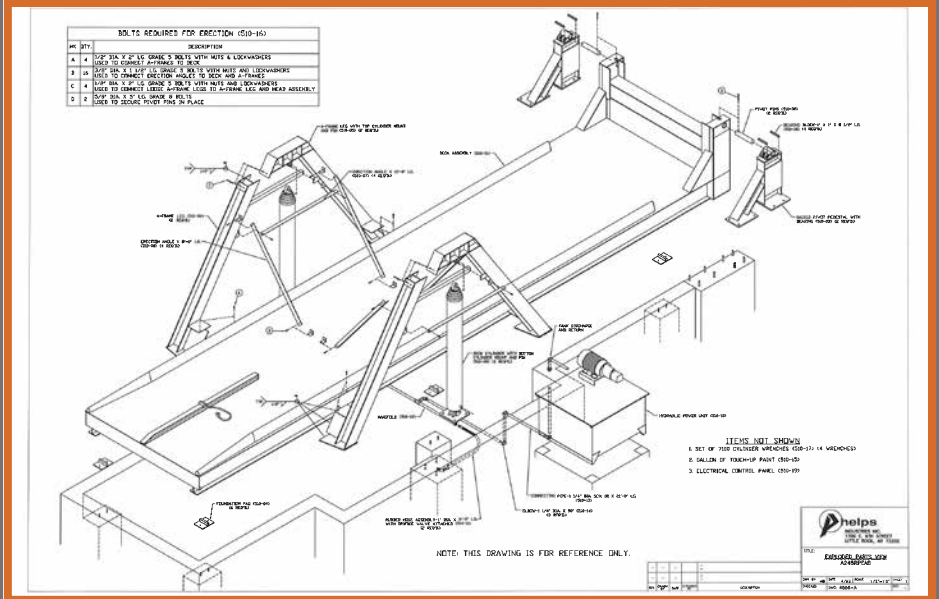


Your Bottom Line. Increased Productivity And Higher Profits.

Phelps hydraulic truck dumpers do more than make the job go smoother. You will notice a dramatic improvement in savings of time, energy and labor ... plus greater plant efficiency and improved working conditions. Also, receiving your raw materials in bulk trailer loads will, in the long run, cut costs of freight to your plant. This savings, overtime, can pay for your new Phelps dumper. The net result to you is increased productivity and higher profits

Whatever or wherever your application, there's a Phelps Hydraulic Truck Dumper that will increase your bottom line.

Let us put our proven experience and expertise to work for you. Call us today for more information.





Our many years of experience guarantee that your Phelps quality hydraulic truck dumper will provide the following:

- Increase your plant efficiency.
- Save energy, time and labor.
- Increase your overall production.
- Improve your working conditions.

Let our proven experience work for you. For more information call us today



The Truck Dumper Specialists

www.phelpsindustries.com

1700 East Ninth Street • P.O. Box 1093 • Little Rock, Arkansas 72203 • (501) 375-1141 • Fax (501) 375-6568

006-2017