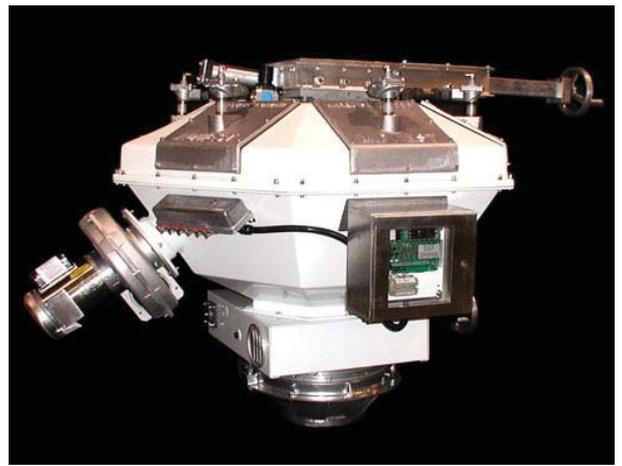


MIDWEST™

i n t e r n a t i o n a l

BULK LOADING SPOUTS

A Modular Product Line for
Dust Free Loading



Enclosed Truck Loading

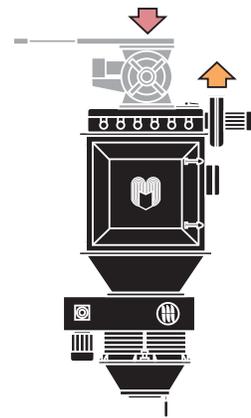
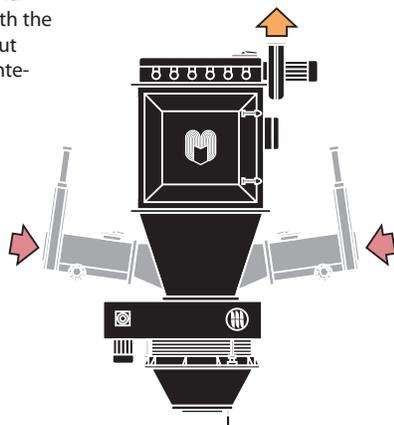
Loading dusty bulk cargo into enclosed trucks and railcars can be made safely, economically and dust free using pre-engineered interchangeable modules from Midwest.

From a single stand alone loading station connected to a dust collector, to the Midwest Vaculoader® with internally vented spout positioner, we have the answer to economic, efficient dust free loading. We offer the Compaculoader™ or Vacupac I™ internally vented systems for low headroom installations. These systems eliminate costly baghouses and high maintenance dust piping. Positioning the spout discharge over a truck can be made easy for an operator without the driver moving the vehicle by using one of our internally vented, remotely operated spout positioners. Our internally vented posi-

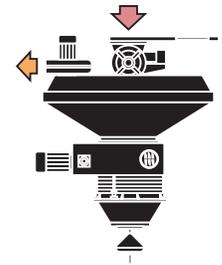
tioner technology continues to set world standards; it eliminates the flexible hose between the moveable spout and dust collector. Add the Vaculoader® or the low profile Compaculoader™ to load cargo dust free without expensive external dust evacuation systems and complex dust piping.

With these Midwest systems, each loading point is self sufficient with its own dust control. Using Midwest's modular designs, project engineers can easily select the most appropriate loading equipment to meet local and federal EPA regulations as well as budget requirements. It is costly to lose time and product. Contamination of terminals, vehicles and atmosphere is no longer acceptable. Midwest products can move enclosed trucks and railcars in and out of a facility faster and with little or no dust.

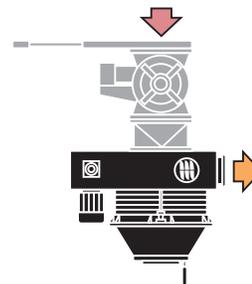
MVL/HC Series hopper feed Vaculoader® integral filter module can load up to 1400 TPH. This Vaculoader® to accept an air gravity conveyor or screw conveyor and provide integral venting of both the conveyor and the loading spout without the need of high maintenance dust piping.



MVL/TC Series top feed Vaculoader® integral filter module can load up to 1400 TPH. The Vaculoader® provides integral venting of the loading spout without the need of high maintenance dust piping.



Low Profile Miniloader™ and Compaculoader™ integral filter modules load up to 500 TPH. Designed with an internal pocket to accept a 90° withdrawal valve, these low profile filter modules provide a practical solution for installation with low head room.

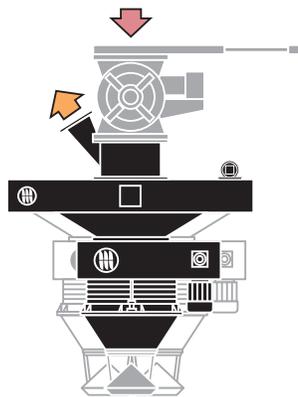


MC22-EV Loading Spout (500TPH) with level sensing system, flanged dust outlet, optional MRWV Series air operated silo withdrawal valve, square to round transition and MHG Series Xtrathin™ maintenance hammer gate. These popular truck loaders feature two (2) point pickup which allows the spout to "swing" out of the way when bumped by a truck.

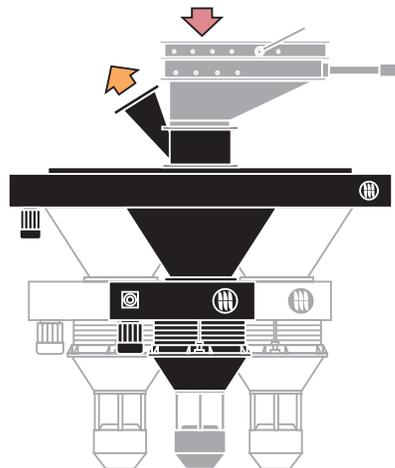


Enclosed Truck Loading

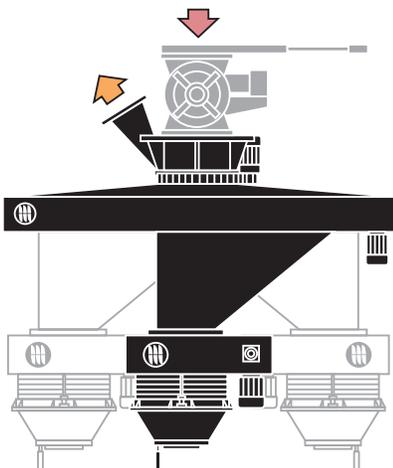
Positioning of a retractable bulk loading spout over an open truck or railcar hatch can be accomplished without boarding the vehicle. Remote positioning is now made easy and dust free using standard horizontal single direction and multiple direction internally vented Midwest spout positioners. Midwest internally vented positioner technology eliminates the flexible hose between the moveable spout and dust collector. Add our Vaculoader® or the low profile Compaculoader™ to load your product dust free without expensive external dust evacuation systems and complex dust piping. With these Midwest systems, each loading point is self sufficient with its own dust control. Using Midwest's modular designs, project engineers can easily select the most appropriate loading equipment to meet local and federal EPA regulations as well as budget requirements.



MFPV Flattop™ (4) way spout positioner is the most popular spout positioner for enclosed truck loading as it provides travel parallel and perpendicular to the truck. Actuated by electric actuator, the Flattop™ provides smooth horizontal travel without the need of a high maintenance chain and sprocket assembly. Shown here with MV22-EV loading spout with Sealtite™ sealing cone, optional MRWV Series air operated silo withdrawal valve and MHG Series Xtrathin™ maintenance hammer gate.



MSPV Series internally vented horizontal spout positioners provide (2) way positioning parallel or perpendicular to the truck. Shown here with venting transition and flanged dust outlet, HOMG hand operated flow control gate with AOG Series sliding knife gate, dust sealed transition and MV22-EV (500TPH) loading spout with optional Spintrim trimmer.



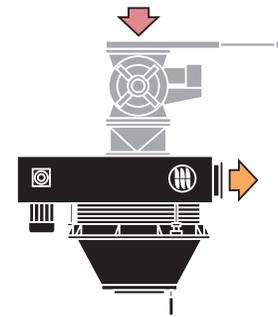
MRSPV Series Roundabout® rotational spout positioners provide rotational positioning in all directions. Shown with optional MRWV Series air operated silo withdrawal valve, MHG Series Xtrathin™ maintenance hammer gate and MV22-EV (500TPH) loading spout.



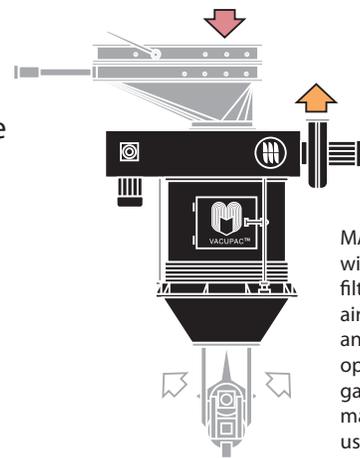
Enclosed Railcar Loading

Enclosed railcar and truck loading stations for loading up to 1000TPH feature the popular and rugged MD30-EV, MV30-EV Series loading spouts and the MA30-EV Series which includes a filter module, air purging system and clean air fan. From a single stand alone loading station with a separate loading spout and dust collector to an integral Vacuolader[®] spout positioner and internally vented loading spout, Midwest has the answer to high speed dust free loading. For dust free railcar loading using minimal personnel, Midwest developed the Articuloader[™] system to allow any type or length of railcar to

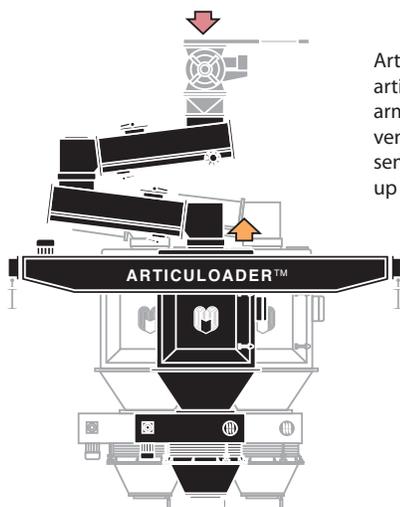
be loaded to full capacity without moving the car. High speed loading of railcars can now be accomplished more safely and dust free. The Articuloader[™] loading system is designed for inside loading of railcars and/or trucks and allows the operator to position the loading spout discharge over any hatch opening regardless of location. Both installations include the Midwest Vacuolader[®] eliminating complex dust piping. Costly loss of product into the atmosphere and contamination of terminals and vehicles can be eliminated. Midwest can move your enclosed railcars and trucks in and out faster and without dust.



MD30-EV loading spout with level sensing system, flanged dust outlet, optional MRWV Series air operated silo withdrawal valve, square to round inlet transition and Xtrathin[™] maintenance hammer gate.



MA30-EV loading spout with Vacuopac[™] I integral filter module and clean air fan, PAT Trimmer[™] and optional power operated sliding knife gate with HOMG manually operated gate used for flow control.



Articuloader[™] loading station with double articulating Airflo[™] air gravity conveyor feed arms and top feed Vacuolader[®] with internally vented MV30-EV loading spout and level sensing system. Articuloader[™] stations provide up to 50 ft of longitudinal travel.

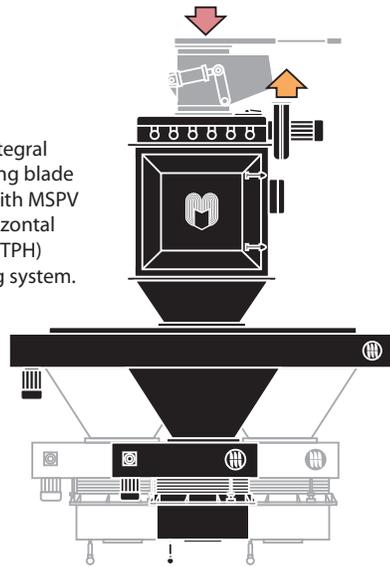


Open Truck and Railcar Loading

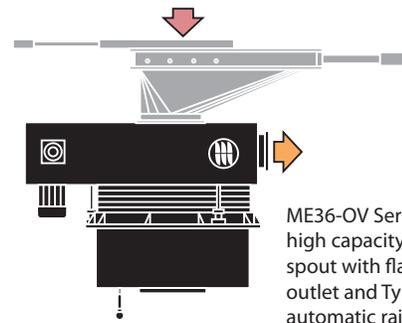
Open truck and railcar loading can be made easy and dust free using Midwest loading technology. Designed to load dusty products from silo, hopper, storage bin, belt conveyor or screw conveyor into open trucks, this pre-engineered product line includes the latest technology in design and construction. When loading open trucks with center ridgepoles, a spout positioner can be installed to allow the operator to position the spout on either side of the ridgepole or back and forth across the loading station, or both, using the Midwest flat top positioner series.

Midwest retractable loaders can be used with any one of our large line of integral filter modules to eliminate high maintenance dust piping. Open vehicle loaders without internal filtration are designed to be connected to a Midwest MDC Series Vacu-pac dust collector, placing the rim of the spout and the top of the pile under a vacuum. These spouts are available with flexible neoprene or gum rubber discharge skirts or the Bulldog™ heavy duty mining series skirt that conforms to the pile.

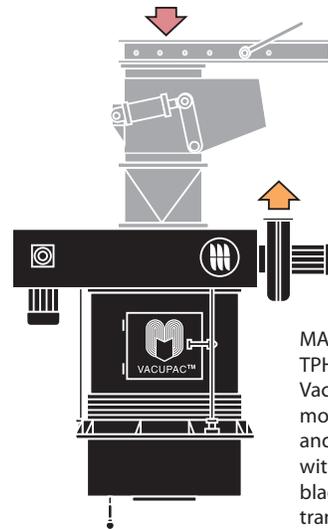
Top feed MVL/TC Series Vaculoader® with integral filtration, clean air fan and MRBG Series rolling blade gate with Xtrathin™ hammer gate. Shown with MSPV Series internally vented single direction horizontal spout positioner and MV30-OV Series (1000 TPH) loading spout and Type "A" automatic raising system.



MD30-OV Series (1000 TPH) loading spout with flanged dust outlet and Type "C" capacitance type automatic raising system. Shown with MRWV Series silo withdrawal valve, square to round transition and Xtrathin™ hammer gate for silo isolation.



ME36-OV Series (1400 TPH) high capacity loading spout with flanged dust outlet and Type "A" automatic raising system. Shown with AOG Series pneumatically actuated sliding knife gate, dust sealed transition and Xtrathin™ hammer gate.



MA36-OV Series (1400 TPH) loading spout with Vacu-pac™ I integral filter module, air purging system and clean air fan. Shown with MRBG Series rolling blade gate, square to round transition, HOMG Series hand operated flow control and maintenance gate.



Enclosed Vessel Loading

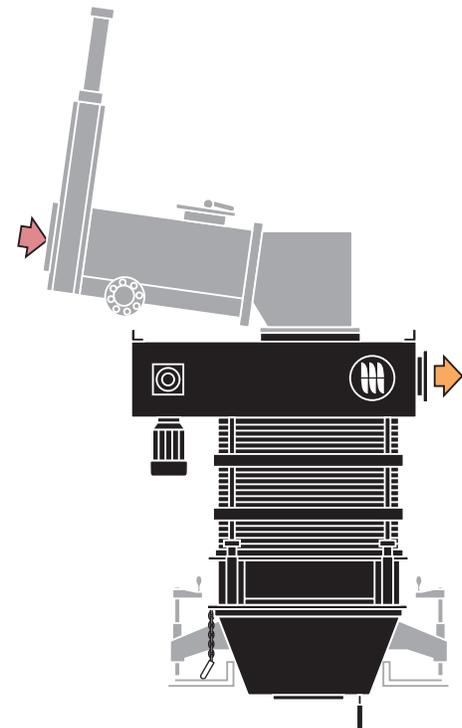
Enclosed vessels can be loaded dust free at high capacities using ship and barge loaders with tapered discharge scavengers. Dry dusty aerated products such as cement, lime and fly ash, which are transported by an enclosed ship or barge, can be loaded through round deck hatches. This series loading spout is capable of high throughput capacity and includes vertical travels to 60 ft.

Enclosed vessels are usually loaded using an Airflo™ air gravity conveyor, screw conveyor, drag or belt conveyor. Applications of this type can include a Midwest Vaculoader® designed into the structural end of the shiploading boom with an Airflo™ air gravity conveyor feed. With the Vaculoader® located on the

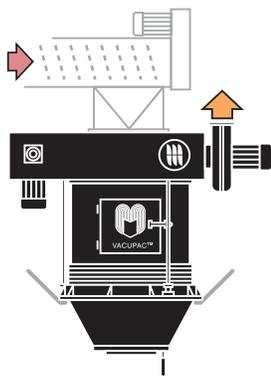
discharge end of the ship-loading boom, the dust control and the loading spout remain in one compact assembly. Using this type of integral dust filtration, complex dust piping is eliminated.

Pivot gimbal assemblies for non-Vaculoader® systems are available for conveyor booms that are designed to lift up and down for storage or park.

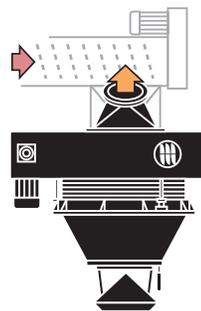
Options for this series include automatic level sensing kits, highly effective air vibrators, product diverters, and positioning handles as well as a variety of construction materials for applications requiring abrasive resistance, high temperature conditions or to comply with marine standards.



Paragon™ Series MG50-EV with flanged dust outlet and up to 1500TPH capacity of dry aerated or semi-aerated product and 50ft travel. Shown with Airflo™ air gravity feed and Type "C" level sensing system. Travels to 60 feet.



Paragon™ Series MA30-EV (1000TPH) enclosed vessel loader includes the Vacupac™ I integral filter module, automatic filter purging system, clean air fan and level sensing system. Shown with screw conveyor feed.



Paragon™ Series MD30 (1000TPH) and ME36 (1400 TPH) loading spout with flanged dust outlet is shown here with optional Sealite™ sealing cone and level sensing system. Travels to 18 feet (MD30) and 40 feet (ME36).

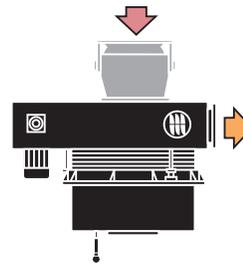


Open Stacking and Vessel Loading

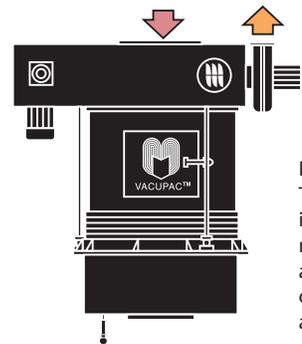
Open stacking and open vessel loading spouts are designed to provide high capacity stockpiling or vessel loading for a variety of dusty products. All units are equipped with heavy duty drives and Torquemaster™ cast machined lift pulleys.

This series is usually installed on a radial or fixed inclined belt conveyor for stockpiling of product or for open vessel loading at the discharge end of a belt conveyor or grain chute. Dust collection options are available to suit system design including the Vacu-pac™ I integral spout and dust filter module, which eliminates dust piping and

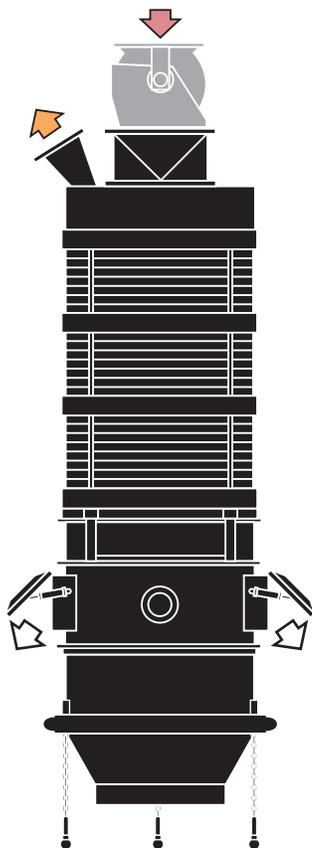
external dust collectors. Automatic raising kits are required to control the height of the spout above the product pile. Rotating trimming spoons are available for all models. Pivot gimbals are also available for applications where the shiploading structure lifts up for parking. Other options include product relief door modules with two, three or four pneumatically operated cast aluminum doors which open immediately if a potential plugged condition occurs, allowing cargo to spill out into the hold to avoid plugging of the system.



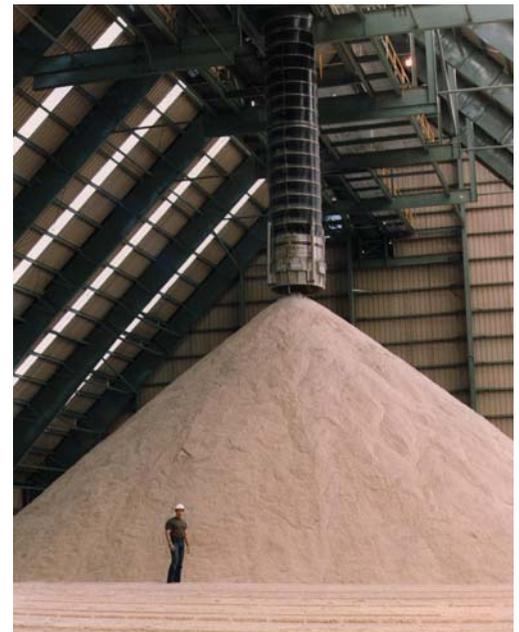
Paragon™ Series MD30-OV (1000TPH) or ME36 (1400TPH) retractable bulk loader shown with automatic raising system, flanged dust outlet and pivot gimbals inlet which allows spout to remain vertical during lifting up and down of shiploader boom.



Paragon™ MA36-OV (1400 TPH) Series dry bulk loader includes the Vacu-pac™ I filter module, filter purging system and clean air fan. A full range of accessories and options are available.



Paragon™ Series MG50 can be used as an open stacker and includes flanged dust outlet and retracting cones. This stacker is shown here with the Midwest VRM Velocity Reduction Module, also referred to as a "drop box." Robust (4) point cable pick-up with Midwest Torquemaster™ cast ductile machined lift pulleys provide stability when moving the loader across a pile. This series is also available with the Vacu-pac™ Bustle Filter and clean air fan which eliminates complex dust piping. The MG50 is available up to 60 FT vertical travel



An Environmental Company

MIDWEST[™]
international
BULK LOADING SPOUTS



Since our development of the first retractable bulk loading spout, over 45 years ago, Midwest has continued to lead the industry with solutions to dry bulk loading problems while meeting strict environmental requirements. Our commitment to building quality products is evident through every phase of engineering and manufacturing, to the last details of testing and shipping. From single spouts to complete loading systems, Midwest products are carefully packaged to protect them from weather and shipping damage until they reach your site. Complete instruction manuals and certified drawings are included for installation, maintenance and operation, but it doesn't end there.

Engineering support is available 24 hours a day, seven days a week, to be sure that your mechanical and electrical installation goes smoothly. Our service capabilities are worldwide. When our name is on the equipment, the commitment to you is there, too.

*Established 1967
Over 45 Consecutive Years of Environmental
Commitment to Industry*