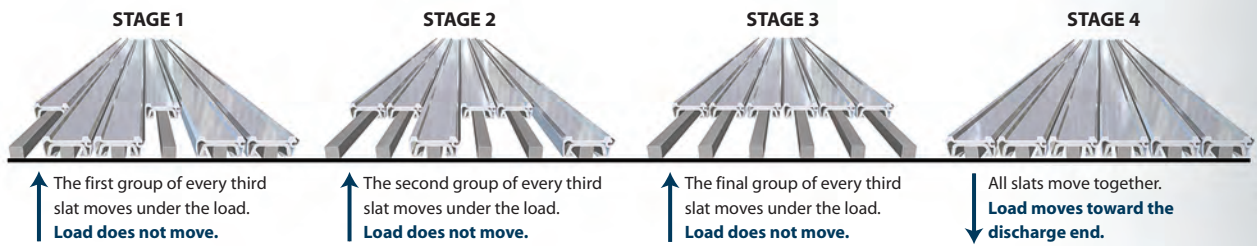


HOW A WALKING FLOOR® UNLOADER WORKS



KEITH® WALKING FLOOR® Systems move nearly any bulk material or palletized cargo.

Agriculture:

Fresh Produce; Compost; Seed; Silage; Cotton (modules and bales); Fertilizer; Peat; Grain; Manure; Livestock Feed; Corn (fresh and seed)

Refuse and Recyclables:

Loose, Baled, Compacted and Bagged Refuse; Commingled Recyclables; Demolition Debris; Aluminum; Municipal Solid Waste; Plastic; Biosolids; Scrap Metal (ferrous and non ferrous); Tires (shredded, chipped and whole); Cardboard; Paper (baled and loose); Soil Remediation

Wood and Paper Products:

Pulp; Chips; Fiberboard; Paper Rolls; Sander Flour; Finger Joint Blocks; Broke Paper; Sawdust; Finished Paper; Mulch; Wood Waste

Energy/Fuel:

Hog Fuel; Biomass; Bagasse; Chipped Tires; Coal; Pellets; Pucks; Refuse Derived Fuel

Other Industries:

Aggregate; Asphalt; Soil; Palletized Cargo; Ice; Document Destruction

The KEITH® Promise:

“The continuous pursuit of excellence in KEITH products and customer service.”

Mark Foster
President

Keith Foster
Founder

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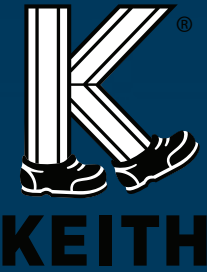
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KEITH
MANUFACTURING CO

Material Handling Solutions:



- Aggregate & Asphalt
- Agriculture
- Energy & Fuel
- Ice
- Mobile Shredding
- Palletized Cargo
- Refuse & Recyclables
- Wood & Paper Products

Mobile Systems

Specially designed for use in a variety of trailers, the KEITH® WALKING FLOOR® system is used worldwide to unload bulk material. Systems unload in minutes and can handle bulk goods, pallets, drums, bales and rolls. Unlike dump or tipper trailers, which require vertical space to unload, trailers outfitted with a WALKING FLOOR® unloader are not limited by height restrictions beyond the height of the trailer.

KEITH® Advantages

- Fast and efficient unloading.
- Unloads indoors, inside tunnels, and on uneven ground.
- Safer unloading, because no tipping is needed.
- Conveys a wide variety of materials.



- Trailers can be top loaded, compactor loaded or loaded with a forklift.
- Lightweight design ensures maximum payload.

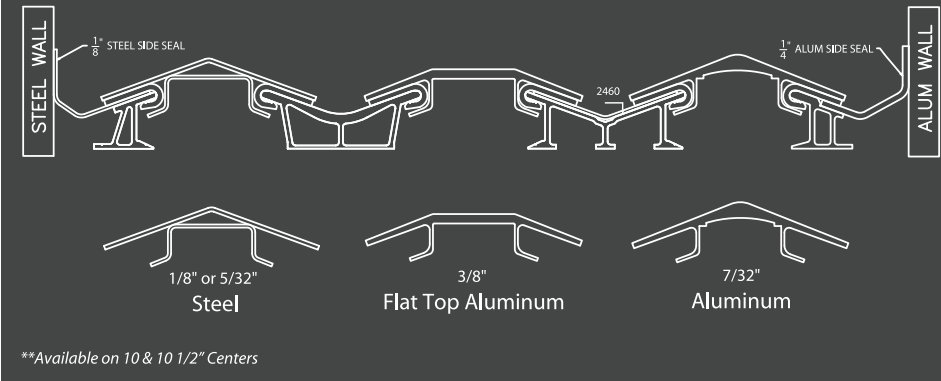
To meet the different needs of haulers, KEITH® has developed a variety of flooring options to accommodate virtually any material. Floor slats are available in light, medium and heavy duty applications. Although the floor slats are most often constructed of aluminum, we have designed steel slats for maximum impact resistance and also a lightweight UHMW slat.

KEITH® Benefits

- Slats are available in a variety of widths and thickness to meet a wide range of customer needs.
- Leak proof and leak resistant models prevent load leakage.
- Most floor slats can support the weight and traffic of forklifts.
- Slat length can be modified, providing for installation in a variety of trailer styles.



V-9 Design Profiles



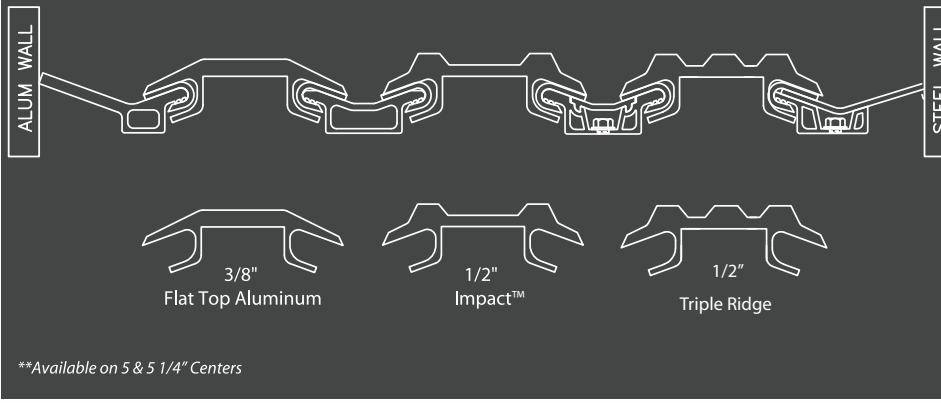
The KEITH® V-FLOOR® unloading system is designed to handle maximum duty loads. Floor slat options include a variety of high wear steel and aluminum profiles. The V-FLOOR® slat design is also leak resistant. As with all WALKING FLOOR® systems, the V-FLOOR® system provides safe, efficient and versatile unloading.

V-9

The most durable slat made by KEITH®, the robust V-9 system is available in both aluminum and steel. The unique slat design absorbs high impact and is suitable for nearly any heavy-duty use. Optional designs are available for high temperature applications.



V-18 Design Profiles



V-18

The aluminum V-18 slat is ideal for materials that do not require the robust V-9 system. The V-18 system is designed to haul multiple products and enhances your ability for backhaul opportunities.

V-FLOOR® Slat Features

- No floor seal.
- Leak resistant.
- Full length bearing support.
- Impact resistant.

www.v-floor.com

The Toughest WALKING FLOOR® Unloader Ever Made

Engineered Solutions



B. Loader fed



C. DrivOn™ bin



D. Large storage bin



E. Small buffer bin

KEITH® WALKING FLOOR® engineered solutions are suitable for storing, receiving and metering a variety of materials. Systems are custom engineered to your specifications with virtually unlimited dimensions and weight restrictions. Systems can be flush mounted, installed above ground, placed in a pit or secured to an existing pad. Available in a variety of configurations, WALKING FLOOR® systems can be constructed to include multiple bins, walls and roofing.

Advantages:

- Power requirements are low.
- Increased power at startup is not needed.
- Low in maintenance.
- Systems easily combine with existing equipment.
- When used properly, system is safer than other conveyors.
- Systems can be driven on by truck or forklift.

A. Pit mounted



Handling Solutions for Difficult Materials



Common Applications:

- Self-unloading trailer floors
- Trailer receiving systems
- Rollover rail receiving bins
- Storage and metering bins
- Process buffer bins

Solutions:

- A** - Pit mounted bin for trailer receiving or loader charging
- B** - Loader fed bin
- C** - DrivOn™ bin
- D** - Large storage bin
- E** - Small buffer bin

KEITH® provides a variety of solutions for handling difficult materials. The unique reciprocating slat design handles nearly any bulk material, including biomass, solid waste, construction debris or whole tires.

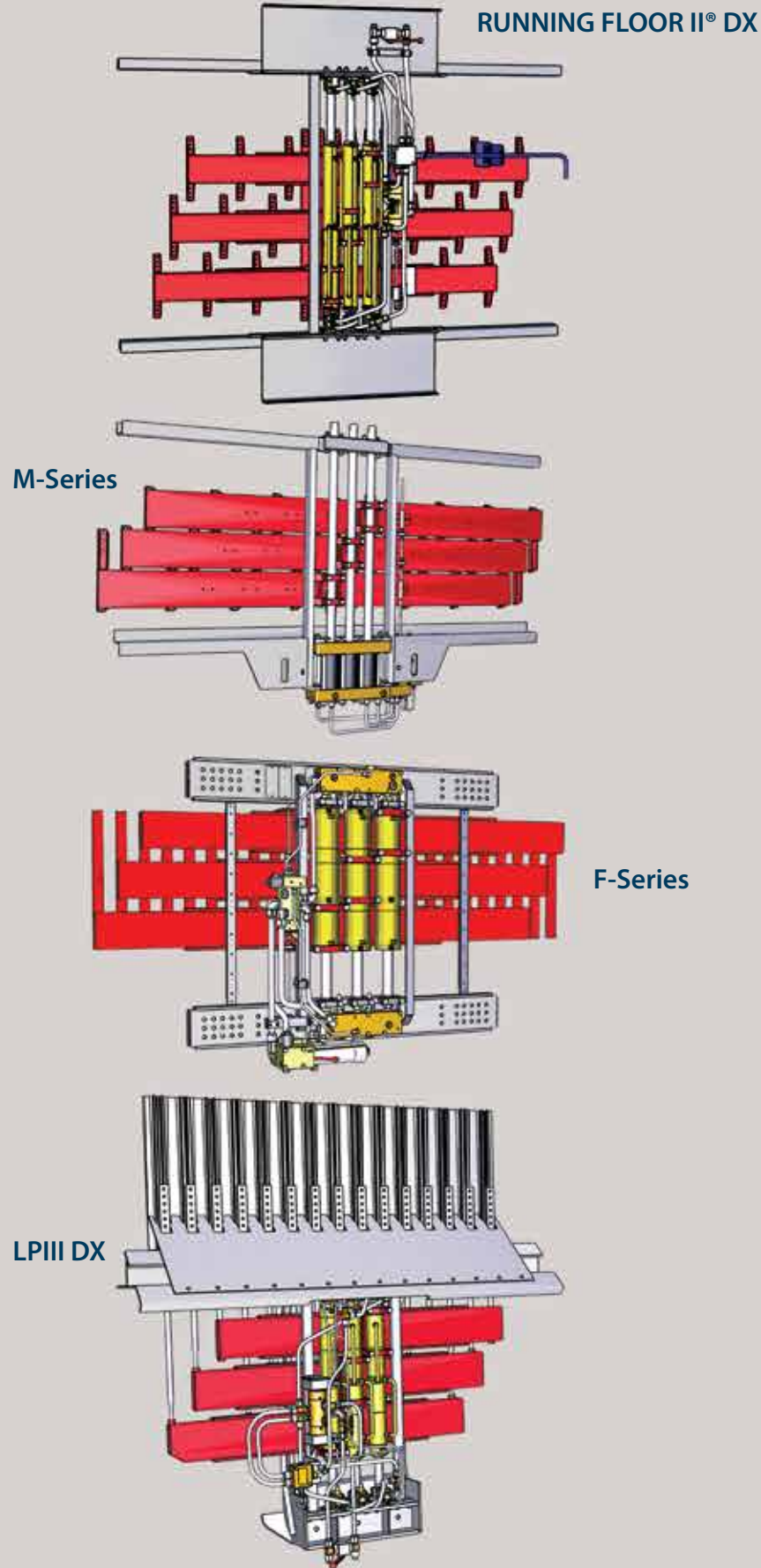
Located side by side, WALKING FLOOR® bins provide versatile storage space for recycling, wood products, compost and other materials. In addition to saving space and labor, bins automatically feed materials for further processing.

Ideal for storing and handling difficult to handle materials, bins provide a true FIFO (First-in, First-out) rotation and precise control.



Drive Components - Superior by Design

RUNNING FLOOR II®
DX Drive



Cylinder Barrels:
To increase the system's strength, KEITH® uses the cylinder barrel and not the cylinder rod as structural members and moves the barrel (not the rod) of its RUNNING FLOOR II® drive.

Cylinder Rods:
Shorter rods minimize exposure to contaminants. Case hardened chrome rods are used for superior wear.

Cylinder Head:
Improved cylinder design includes a double wear ring to protect the seals on both sides and an added buffer seal. An external rod wiper reduces entry of contaminants.

Cylinder Piston:
High temperature resistant wear ring protects cylinder barrel from scoring.

Cross Drives:
Each cross drive moves every third slat and is supported by a slide bearing.

Steel Hydraulic Tubing:
Standardized design makes replacement easier. A zinc coating protects against corrosion.

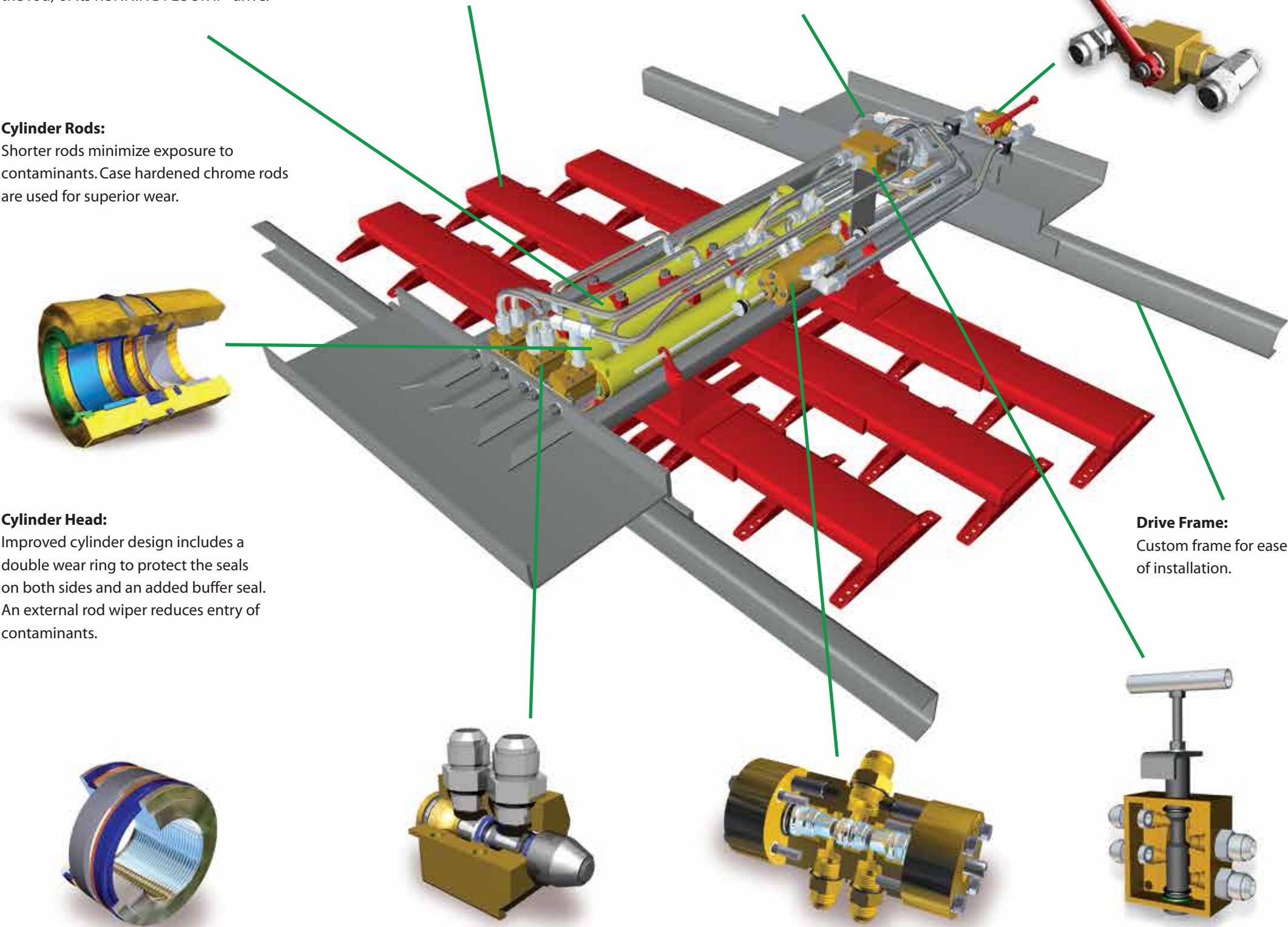
Ball Valve:
Functions as positive on/off for drive unit.

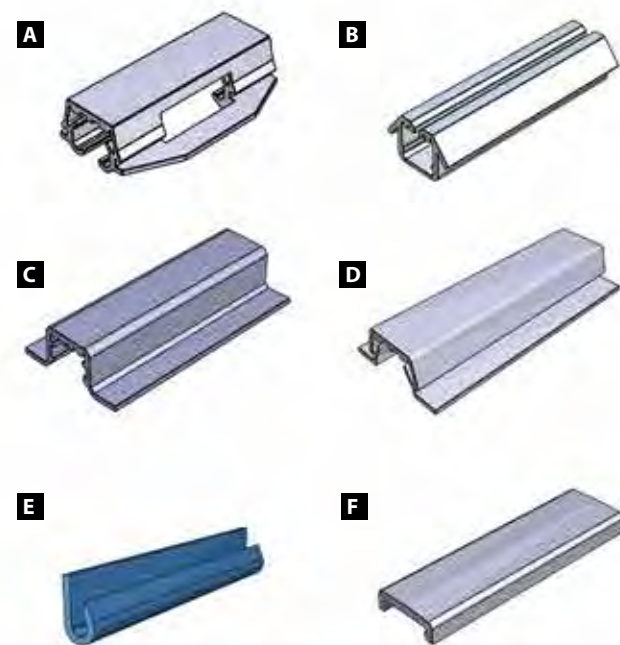
Drive Frame:
Custom frame for ease of installation.

Check Valve:
Externally mounted valves are easily accessible. JIC fittings make emergency repairs easier, when necessary.

Switching Valve:
Oil flow activates the poppet design, which controls the reciprocating action of the floor.

Control Valve:
Determines loading or unloading mode. Ported valve contains O-ring fittings.

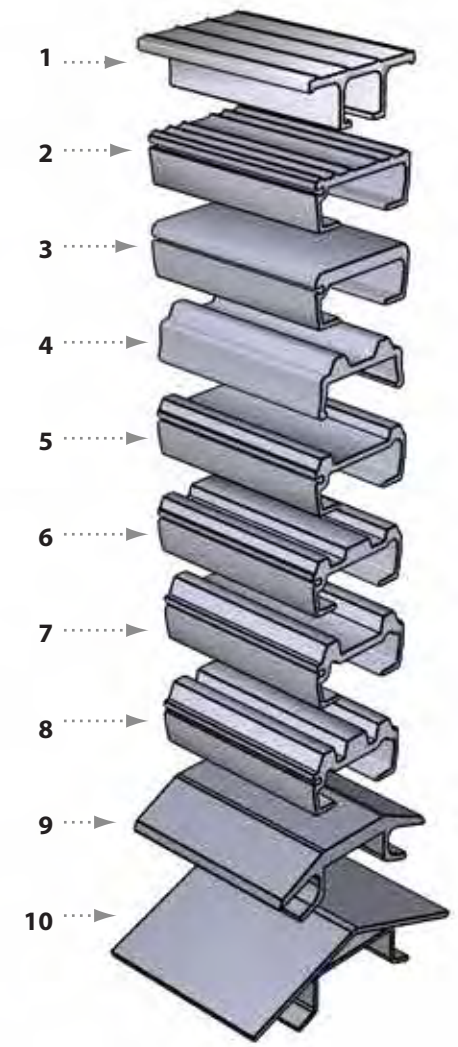




- A B Winged Bearing & Hold-Down Bearing**
Made of long-lasting, low friction material, slide bearings require no lubrication.
- C Splash Guard Bearing**
The Splash Guard Bearing prolongs the life of the slide bearings and the floor. With more than twice the surface of the standard Winged Bearing, the Splash Guard Bearing significantly increases slat life.
- D Splash Guard Hold-Down Bearing**
Functioning as three bearings in one, the Splash Guard Hold-Down Bearing prolongs the life of the bearing and the flooring. In addition, it cuts bearing installation time in half. (Requires 2468 sub-deck).
- E V-FLOOR® J-Bearing**
The J-Bearing for the V-FLOOR® system provides full length support for the slats.
- F PRESSURE SEAL® Bearing**
Features full length bearing and slats held in place by "T" block hold down.

Slats are available in a large selection of profiles designed for medium to severe duty, including the popular IMPACT™ and V-FLOOR® Series.

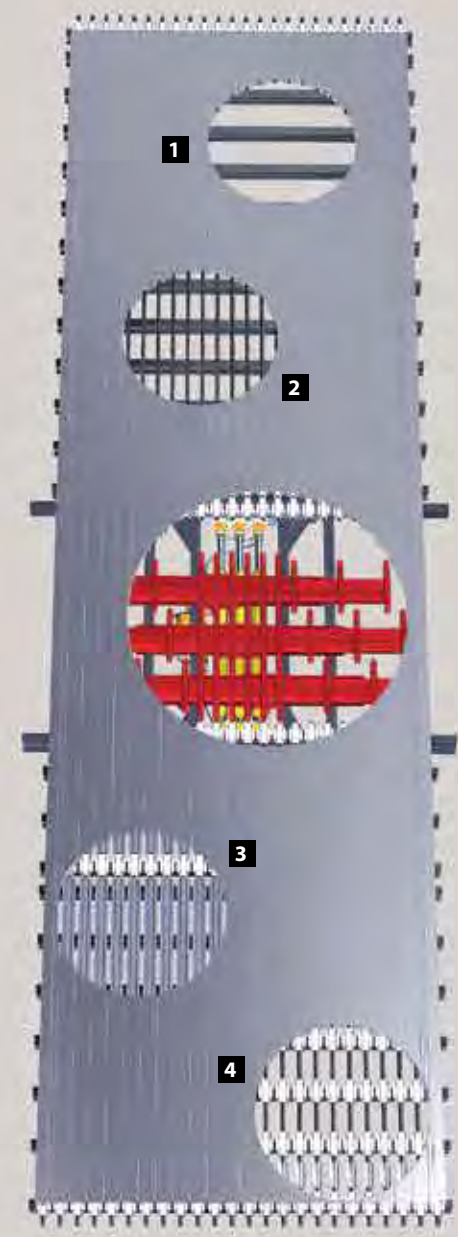
Slat Profiles*



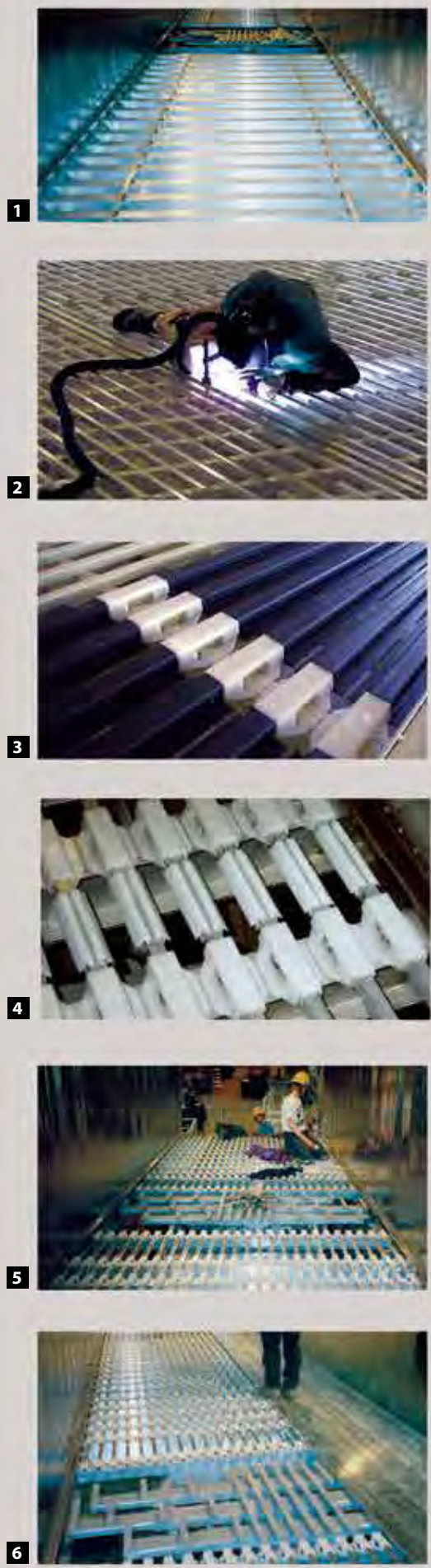
1. PRESSURE SEAL® series flooring is ideal for use in moving all types of agricultural commodities.
2. Thickness of slat boosts floor strength for heavier loads.
3. Versatile design used in variety of industries and provides a longer life when hauling abrasive materials.
4. Special slat design prevents leakage of wet loads.
5. Absorbs more impact during top loading, reducing bending of the slat.
6. Continuous Wear Strip creates a long-lasting slat, ideal for compactor loading applications.
7. Thicker, higher ridges are used for heavy-duty applications.
8. The additional wear ridge provides even, optimal impact absorption and is compactor compatible.
9. (V-18) No floor seal, full length hold-down and full length bearing make the V-18 more leak resistant than standard flooring and better suited for backhauling a wide variety of loads.
10. (V-9) Available in steel or aluminum, the high-impact slat is ideal for maximum duty loads.

* Additional slat profiles are available.

KEITH® WALKING FLOOR® System Installation
(overhead cut-away view)



1. Cross-members provide the foundation for the KEITH® WALKING FLOOR® system.
2. The sub-deck consists of 1" or 25 mm square tubing or aluminum channel, and is welded or bolted to the cross-members.
3. On mobile applications, the Splash Guard Bearing increases the life of the flooring by protecting the underside from road grime.
4. The Winged Bearing evenly supports the flooring. Hold-Down Bearings are mounted at the discharge end of the system.
5. The bearings are snapped down onto the sub-deck. Configuration of the bearings will vary.
6. Slats are then attached to the cross-drives.



Specialty Products

Ice Storage and Metering System

Improve plant efficiency and automate your ice delivery system with a KEITH® *WALKING FLOOR*® bin. Systems provide a true first in, first out material rotation without leaving residual ice, ensuring that clean up is an easy process.



Mobile Document Destruction

The KEITH® M-Series Drive increases efficiency in the mobile document destruction environment. With a load capacity of up to 16 ton, the M-Series stores shredded documents and automatically unloads them once the truck reaches a secure location. Unloading time is under five minutes and no tipping is needed.



Cotton Module Feeding System

Cotton Module Feeding Systems easily convert a traveling head to a stationary feeder head. With the continuous feed of a KEITH® *WALKING FLOOR*® conveyor, ginners no longer need to stop the ginning process to reload a traveling head.

Aggregate & Asphalt

The KEITH® V-FLOOR® System is specially designed to handle maximum duty loads. The durability of the slat makes it ideal for unloading aggregate, asphalt and other abrasive materials. Horizontal unloading is more stable than using a tipping or dump trailer, increasing work site safety.



Dock to Trailer

The Dock to Trailer System integrates the warehouse and transportation environments by fully automating both functions. The drive unit is installed in the dock and drives the slats on both the dock and trailer once they are connected. This makes for lighter trailers. The entire trailer can be automatically loaded or unloaded in minutes.

www.dock2trailer.com



PALLET WALKER®

The KEITH® PALLET WALKER® addresses problems unique to conveying pallets, drums and baled material using a standard *WALKING FLOOR*® system. Due to the floor motion, pallets do not twist or bind.



Continuous Floor

The Continuous Floor moves at a constant rate, achieving an even feed of material. The system is useful where a continual flow of material is needed, such as the Cotton Module Feeder. The system provides a quicker unload time with the same amount of power as a standard floor.

Have an idea? Give KEITH® a call. Our engineers can help you innovate new ways to make your material handling process safer, more efficient and more reliable.
www.keithforum.com