Leading Innovator of Vertical Solutions
**Leading the Industry, Now and Always**

PFlow pioneered the vertical reciprocating conveyor industry in 1977. We've never looked back. Every day, we're innovating products that lift success.

Our engineering team – by far the largest in the market – will solve any vertical lifting challenge. From aeronautics to automotive, petrochemical to printing, PFlow creates solutions for every industry.

Each project is unique. That's why, at PFlow, innovation never ends. Others copy us. They'll never catch us.

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**Best Lifecycle Costs:**
PFlow uses heavier-gauge steel, larger shafts, stronger bearings and industrial-grade motors in its vertical lifting systems. The result? Greater durability, less maintenance, and the lowest lifecycle costs.

**Singular Focus:**
PFlow created the vertical reciprocating conveyor (VRC) industry. Our sole focus is lifting products. All of PFlow's research, development and design centers around manufacturing the strongest, safest, most reliable VRCs on the market.

**Strength in Numbers:**
PFlow has manufactured and sold over 18,000 VRCs, more than double its combined competitors. Customer recognition quality. PFlow delivers it.

**Custom Design:**
All PFlow products are custom designed and built to exact specifications - no “one size fits all” here. Dimensions and capacities match customers' unique needs. Applications are engineered to order.

**Superior Safety:**
Safety is built into every element of a PFlow lifting system. All products are built 3-to-1, every yield on structure, and all lifting components exceed industry design standards. The patented DockLock System increases safety during load handling and unloading. The DockLock System also protects materials and equipment. Unparalleled design, coupled with stronger components, builds superior safety into all PFlow VRCs.

**Largest Product Selection:**
PFlow offers the greatest variety of VRCs on the market, all with greater capacities, faster speeds and longer leverages than competitors' products. Every PFlow VRC is custom built to match the customer's exact specifications and needs.

**Unmatched Installation Capability:**
PFlow offers complete installation service for all its products, or assistance with the installation process. PFlow can help customers find certified local installers, many of whom were trained by PFlow, through its long-term relationships with distributors.

**Spectacular Service:**
The dedicated, highly-trained service team at PFlow has more than 75 years combined experience – far and away, the most in the VRC industry. You're never on your own, whether for product installation, on-site troubleshooting, shipping parts overnight, or any other need.

**Hands-On Product Training:**
PFlow offers on-site training for customers in operation and maintenance of its products. Educated employees are critical to safe and efficient use of VRCs.

**Low-Risk Code Compliance:**
PFlow helps shape safety and regulatory codes governing the VRC industry, and guarantees its products meet all federal, state and local requirements. PFlow is the only VRC manufacturer with a full-time code specialist on staff, who continuously mentors legislation and compliance, and is available for on-site consultation with customers.

**Engineering Expertise:**
The expert, award-winning engineering team at PFlow has hundreds of years of VRC industry expertise, far exceeding any competitor. Its collective expertise and know-how ensures that cost-effective solutions can be found for any challenge, no matter how complicated.

**Fast Order Processing:**
PFlow's emphasis on lean manufacturing means that, when customers place an order, their product is delivered expeditiously – custom built, and ready to perform.

**Global Footprint:**
PFlow has installed VRCs in five of the world's seven continents. Wherever you are, PFlow will provide vertical lifting solutions that meet your material handling needs.

**Persistent Problem-Solving:**
Everyone at PFlow is completely dedicated to the design, manufacture and servicing of VRCs. They've overcome the toughest challenges. No problem is too large, or too hard, to solve. As a PFlow customer, this team is on your side.

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**We don't "make sales." We create solutions.**

For more than four decades, everyone at PFlow has focused solely on serving customers. Their continuous dedication to innovation – and your success – is unmatched.

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**Industry-Leading Service and Product Support**

PFlow’s unparalleled service and product support mean that you’re never on your own.

From pre-installation planning, to installation, or trouble shooting, we’re here for you. Service begins immediately, and never ends. Our experienced, professional team is always ready to help.

Unlike some competitors, we embrace the concept of "service after the sale." Why? Because, to us, you’re a customer - not a "sale." It’s a distinction we never forget.

PFlow takes tremendous pride in our products' performance and durability. Our service team is committed to providing the best customer support anywhere – no questions asked.

With lifts operating in five of the world's seven continents, our highly-trained technicians are available for consultation 24/7.

Contact the PFlow service team for assistance with:
- Installation Supervision
- Code Compliance
- Maintenance
- Operator Training
- Start-up
- Maintenance Training
- Safety Inspection
- Code Compliance Inspections

Our web site (www.pflow.com) contains a wealth of easily-accessible resources: owners manuals, installation manuals, CAD drawings, dimensions and data, CSI specifications, comprehensive AIA (American Institute of Architects) specifications, and more.

Our people make the big difference. For troubleshooting, field training or any other need, the PFlow service and support team stands ready. You'll work with people who know how to help and, as importantly, want to help – because, above all, we value our relationship with you.

PFlow leads, collaborates, and stays current on industry trends through various associations. PFlow and its employees are members of APICS, ASQ, AIIME, AWS, CSS, MSHA, MI, NAEC, NFIB, NPE, SME, and TEC.

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Movable Platform – Custom 4-Post VRC
Includes a retractable lower aluminum ramp and power roll-up doors. 3,000 lbs. capacity.

Missile Work Platform – Custom Screw Lift
Vertical travel is controlled via screw lifts. Travels laterally on 18” wheels. 6,500 lbs. lifting capacity.

Screw Lift – Custom Platform
Rectangular 18.5’ x 20’ platform provides absolute stability needed to move satellites. 80,000 lbs. lifting capacity; 3’ per minute travel speed.

Moving Floor System – Custom Design
390’ x 25’ moving-floor, weighs in at just under one million lbs. and uses a string of wheeled carts with a loading surface of steel plates. 20,000 lbs. point loads; 4’ per minute horizontal travel speed.

University Research – High-Capacity Lift – Custom 4-Post VRC
This precise vertical and circular motion lift is installed in a scientific accelerator facility for nuclear science. 26,000 lbs. lifting capacity; 9’ lift travel; 5” per minute travel speed.

Winery Lift – F Series Mechanical VRC
This through-floor application is in service year-round and in constant use 12-14 hours each day. 20,000 lbs. lifting capacity; 20’ lift travel; 3 levels of service.

University Research – High-Capacity Lift – Custom 4-Post VRC
Winner of 2016 Governor’s New Product Award. 163,000 lbs. lifting capacity; 75’ lift travel; 4 levels of service; 10’ per minute travel speed.

Aeronautics Lift – M Series Mechanical VRC
Moves materials to assist with the production of airplanes. 5,000 lbs. lifting capacity; 18’ 7” lift travel; 3 levels of service; 27’ per minute travel speed.

Robotic Parking System – High-Speed Vertical Lifts
7-level, high-speed vertical parking garage stores 325 cars. Programmable controls ensure uninterrupted operation. Lifts send and retrieve automobiles at a rate of 400 FPM.

Boat Mold Lift – F Series Mechanical VRC
Retrofitted design doubles storage space for fiberglass mold dollies in lamination production area. 5,000 lbs. lifting capacity.

Winery Lift – F Series Mechanical VRC
Combination of two material lifts. The first is a screw lift mechanism. The second is a material lift that traverses sideways and lowers onto the first lift. 5,000 lbs. lifting capacity; 18’ lift travel; 3 levels of service; 17’ per minute travel speed.

Fuel Cell Energy Material Lifts – F Series Mechanical VRC
Combination of two material lifts. The first is a screw lift mechanism. The second is a material lift that traverses sideways and lowers onto the first lift. 5,000 lbs. lifting capacity; 18’ lift travel; 3 levels of service; 17’ per minute travel speed.

Screw Lift – Custom Platform
Rectangular 18.5’ x 20’ platform provides absolute stability needed to move satellites. 80,000 lbs. lifting capacity; 3’ per minute travel speed.

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Telescope Lift – Custom Designed 4 Post VRC
19’ x 19’ lift carriage and dual motor drive transport the telescope’s delicate mirror. 54,000 lbs. lifting capacity (44,000 lb. mirror/10,000 lb. carriage); 76’ lift travel; 5’ per minute travel speed.

Distribution Center Material Lifts – F Series Mechanical VRC
Global logistics distribution center relies heavily on 20 high-capacity VRCs with state-of-the-art sorting capabilities. 15,000 lbs. lifting capacity per lift.

9-Ton Window Operators – Special Application
Two windows in private Florida residence split like freight elevator doors, and can be completely hidden in the walls. 33’ wide x 22’ high.

Beer Keg Lift – M Series Mechanical Cantilever VRC
These four lifts assist in the movement of 1,600 kegs throughout an NFL game. 40’ per minute travel speed.

Home Appliance Lifts – M Series Mechanical VRC
Ten lifts installed as a mezzanine application, including a conveyorized system. 1,200 lbs. lifting capacity; 200’ per minute travel speed.

Waste Incinerator Lift – F Series Mechanical VRC
Lift moves contraband materials seized by law enforcement authorities from the ground level to an elevated incinerator. 15,000 lbs. lifting capacity; 79’ lift travel; 37’ per minute travel speed.

Naval Shipyard Drydock – F Series Mechanical VRC
High-capacity lift moves materials and equipment used to build, repair and modernize the Navy’s largest ships. 30,000 lbs. lifting capacity; 50’ lift travel; 30’ per minute travel speed.

Motorcycle Lift – 21 Series Hydraulic VRC
Transports motorcycles and parts between service and storage levels. 2,000 lbs. lifting capacity.

Mini Dealership Lift – F Series Mechanical VRC
Shaftway application uses a 14’ x 20’ carriage to move vehicles. 10,000 lbs. lifting capacity.

Public Utility High-Capacity Lift – F Series Mechanical VRC
Mezzanine application services a hydroelectric dam by moving components and parts. 20,000 lbs. lifting capacity; 40’ lift travel.

Auto Dealership High Rise Lift – F Series Mechanical VRC
High-capacity lift moves luxury automobiles to storage and service levels. 8,000 lbs. lifting capacity; 73’ lift travel; 6 levels of service.
LIFTING SOLUTIONS | INTERIOR, EXTERIOR, ABOVE & BELOW GROUND

M SERIES MECHANICAL VRC
A robust, versatile lift ideal for high-capacity, high-cycle applications between two or more levels. Accommodates indoor and outdoor environments.

FULLY AUTOMATED LIFT SYSTEM
PFlow’s fully automated lifting system can handle loads in a high-throughput application. Using programmable controls (PLCs), it accommodates multiple traffic flow patterns and different vertical levels.

MOVING FLOOR ASSEMBLY LINE
Custom moving floor systems are used in numerous manufacturing processes. PFlow’s fully-integrated lifts increase productivity, improve safety and lower facility work loads.

Screw Lifts
A specialized lifting solution for applications that require high levels of precision, accuracy and stability. Used in advanced manufacturing and high-performance areas.

D SERIES HYDRAULIC VRC
This entry-level, hydraulic 2-level low-maintenance lift is ideal for mezzanine and balcony applications up to 15’. It’s the low-cost way to move lighter pallet loads!

B SERIES BOX LIFT
Pre-wired modular lift designed to move small loads between floors. Hand loaded on each level at an ergonomic height.

PFLOW LIFT CAPABILITY STANDARDS

<table>
<thead>
<tr>
<th>LIFT TYPE</th>
<th>Mechanical</th>
<th>Hydraulic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lift Capacity</td>
<td>Up to 50,000 lbs. or more</td>
<td>Up to 8,000 lbs.</td>
</tr>
<tr>
<td>Vertical Travel</td>
<td>Up to 200’ and more</td>
<td>Up to 22’</td>
</tr>
<tr>
<td>Travel Speed</td>
<td>Up to 400 FPM</td>
<td>Up to 24 FPM</td>
</tr>
<tr>
<td>Carriage Size</td>
<td>3’ x 3’ and up</td>
<td>Up to 12’ x 10’</td>
</tr>
<tr>
<td>Automated/Remote</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

PFlow can design and build custom lifts up to 300,000 lbs. lift capacity.

Compared to typical assembly line systems using slat conveyors:
• Lower cost
• Lower maintenance
• Higher reliability
• Heavier overall load capacity
• Higher point load capacity
• Customized to specific applications
No matter how specialized the application, PFlow will create a custom vertical reciprocating conveyor to meet your needs. Our experience and expertise span an incredibly diverse spectrum of industries. If it requires lifting, we’ll make it happen. PFlow founded the VRC industry in 1977. We’ve been the undisputed market leader ever since. We’re ready to lift your success - whatever it takes.
M SERIES | 2-POST MECHANICAL LIFT

Transports large, heavy loads between two or more levels.
Ideal for high-speed or high-cycle automated systems.

• Lifts loads up to 10,000 lbs. Carriage size 12' x 12' standard. Customization available for larger sizes.
• Vertical rise to 200’ or more. Standard travel speed is 25-30 FPM.
• Straddle or cantilever.
• Indoor or outdoor use.

GENERAL
Principal components of the M Series are guide columns, carriage and a motor-gear reducer drive.

STRUCTURE
Guide columns are 6” wide flange sections. Carriage is fabricated with heavy structural steel members and a steel deck plate. Other deck surfaces can be supplied. Straddle or cantilever carriage available, depending on application.

OPERATION
Carriage is lifted and lowered by roller chain attached to an electric motor/reducer assembly mounted on the guide columns. Standard units employ 2 HP to 15 HP TEFC brake motors.

SAFETY FEATURES
Travel of the carriage is controlled by a limit switch. When the switch is tripped or power is lost, the motor shuts off and the mechanically actuated brake is engaged. Overload protection is provided by a relay that measures the motor current. If the current exceeds the amount required to move the maximum load, it will shut the unit down and engage the brake. Chain sensors shut down the lift if chain tension is lost. Chain tensioners and guides prevent chains from jumping on sprockets. NO RIDER signs posted at each point of operation.

CARRIAGE SIDE GUARDS
Carriage is equipped with safety rails on non-operating sides, and a safety chain, drop bars or gates on operating ends. Optional expanded metal or sheet metal carriage side guards available.

SAFETY ENCLOSURES / GATES
Safety codes (ASME B20.1) require interlocked gates with enclosures on all sides of the lift. Enclosures must be a minimum of 8’ high and reject a ball 2” in diameter. See page 23 for additional information.

• Lifetime structural warranty.
• ASME B20.1 compliant.
• Superior strength, reliability and long-term performance.
• Carriage is lifted and lowered by heavy-duty roller chain using a shaft-mounted gear reducer and motor, mounted atop 6” guide columns.
• Advanced built-in safety features protect workers and materials.
• Certified safety cams prevent carriage descent in the event of a chain failure.

SAFETY FEATURES

Rider Safety System available for added security at critical upper levels.
Optional hot-dipped galvanized or epoxy finish available for outdoor or wash-down environments.
Explosion-proof components available for classified environments.

*Weight capacity based on carriage size and added options. Contact a PFlow representative for more information.
OVER 40 YEARS
F SERIES | 4-POST MECHANICAL LIFT

Transports multiple pallets, oversized materials, large carts or heavy machinery between two or more levels. Ideal for high-speed, high-cycle or automated systems.

GENERAL
Principal components of the F Series are guide columns, carriage and a mechanical lifting mechanism.

STRUCTURE
Guide columns are built from wide-flange beams. Carriage is fabricated of heavy-duty structural steel members and deck plate. Other deck surfaces available.

OPERATION
Carriage is lifted and lowered by roller chain attached to an electric motor-reducer assembly mounted on the guide columns. Standard units employ 2 HP to 15 HP TEFC brake motors.

ELECTRICAL
Standard power requirements are 230/460VAC, 3-phase. Control voltage is 110VAC. Standard control panels and push button stations are NEMA 12 rated. Push button stations provided at each level include momentary contact, call/send operators and mushroom head emergency stop.

SAFETY FEATURES
Travel of the carriage is controlled by a limit switch. When switch is tripped or power is lost, the motor shuts off and the mechanically actuated brake engages. Overload protection provided by a relay that measures motor current. If the current exceeds the amount required to move the maximum load, it will shut the unit down and engage the brake. Chain sensors shut down the lift if chain tension is lost. Chain tensioners and guides prevent chains from jumping on sprockets. NO RIDER signs posted at each point of operation.

SAFETY ENCLOSURES / GATES
Safety codes (ASME B20.1) require interlocked gates with enclosures on all sides of the lift. Enclosures must be a minimum of 8’ high and reject a ball 2” in diameter. See page 23 for additional information.

CARRIAGE SIDE GUARDS
Carriage is equipped with safety rails on non-operating sides, and a safety chain, drop bars or gates on operating ends. Optional expanded metal or sheet metal carriage side guards available.

DECKLOCK SAFETY SYSTEM
DeckLock Safety System available for added security at critical upper levels.

ASME B20.1 compliant.
Carriage is lifted and lowered by heavy-duty roller chain attached to mechanical lifting mechanism, mounted atop guide columns. Guide columns vary from 6” to 12”.
Four-post design allows loading and unloading from all sides with flexible traffic patterns.
Advanced built-in safety features protect workers and materials.
Certified safety cams prevent carriage descent in the event of a chain failure.

DECKLOCK SAFETY SYSTEM
DeckLock Safety System available for added security at critical upper levels.

Optional hot-dipped galvanized or epoxy finish available for outdoor or wash-down environments.

Explosion-proof components available for classified environments.

*Weight capacity based on carriage size and added options. Contact a PFlow representative for more information.
OVER 40 YEARS
21 SERIES | 2-POST HYDRAULIC LIFT

Transport materials between two levels. Carriage remains level regardless of load placement.

GENERAL
Principal components of the 21 Series are guide columns, carriage and hydraulic actuating mechanism.

STRUCTURE
Guide columns are 6” wide flange. Carriage is fabricated of heavy-duty structural members with steel deck plate. Other deck surfaces available. Straddle or cantilever carriage available, depending on application.

OPERATION
Carriage is lifted and lowered by two hydraulic cylinders mounted on guide columns. Cylinders are actuated by remote mounted hydraulic pump. Transmission of the lifting force is through roller chain attached to the cylinders and carriage. A torsion bar links the two cylinders to equalize the load and ensure carriage remains level at all times.

SAFETY FEATURES
Upward travel of carriage is limited by mechanical stops that ensure positive leveling on upper deck. Positive mechanical stops prevent overtravel. Pressure builds to “lock” carriage into position at upper level. NO RIDER signs posted at each point of operation. DeckLock Safety System available for added security at critical upper levels.

CARRIAGE SIDE GUARDS
Carriage is equipped with safety rails on non-operating sides, and a safety chain, drop bars or gates on operating ends. Optional expanded metal or sheet metal carriage side guards are available.

SAFETY ENCLOSURES / GATES
Safety codes (ASME B20.1) require interlocked gates with enclosures on all sides of the lift. Enclosures must be a minimum of 6’ high and reject a ball 2” in diameter. See page 23 for additional information.

ELECTRICAL
Standard power requirements are 208/230/460VAC, 3-phase (single-phase available). Control voltage is 24VAC. Push button stations and pump mounted pre-wired control panel are NEMA 12 rated. Push button stations provided at each level and include call/send operators and mushroom head emergency stop. Quick connect pre-wiring is optional.

• Lifts loads up to 6,000 lbs.*
• Carriage sizes up to 12’ x 10’.
• Vertical rise to 22’.
• Standard vertical travel is 24 FPM.
• Straddle or cantilever.
• Indoor or outdoor use.
• Lifetime structural warranty.
• ASME B20.1 compliant.

• Carriage is lifted and lowered by chain over sprockets actuated by column-mounted cylinders. Synchronized shaft ensures that carriage stays level at all times.
• Highly stable loading and unloading operations maintained by pressure switch that prevents carriage from drifting or sinking.
• Check valves hold carriage in place in event of power loss.
• Certified safety cams prevent carriage descent in the event of a chain failure.

• Velocity fuses prevent uncontrolled carriage descent in the event of a hose rupture.
• Field wiring costs greatly reduced by optional quick-connect cabling for push-button stations and gate interlocks.
• Optional hot-dipped galvanized or epoxy finish available for outdoor or wash-down environments.
• Explosion-proof components available for classified environments.

*Weight capacity based on carriage size and added options. Contact a PFlow representative for more information.

For immediate answers to your application questions, call PFlow at 414-352-9000, visit www.pflow.com or e-mail info@pflow.com
OVER 40 YEARS
D SERIES
HYDRAULIC LIFT

Transports materials between two levels. Innovative design ensures highly-stable loading and unloading operations.

• Lifts loads up to 3,000 lbs.*
• Carriage sizes up to 6’ x 6’.
• Vertical rise to 15’. Standard vertical travel is 17 FPM.
• Indoor or outdoor use.
• Lifetime structural warranty.
• ASME B20.1 compliant.

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Upward travel of carriage limited by mechanical stops that ensure positive leveling with upper deck. Positive mechanical stops prevent overtravel. Pressure builds to “lock” carriage into position at upper level. NO RIDER signs posted at each point of operation. DeckLock Safety System available for added security at critical upper levels.

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**B SERIES | BOX LIFT**

Transports loads to mezzanines and between floors. Ideal for lifting boxes, totes, cartons, barrels, sacks, cases and individual parts.

- Lifts loads up to 500 lbs.
- Standard carriage size is 3' x 3'.
- Vertical rise up to 15' 9".
- 30" above floor loading position.
- Standard travel speed is 30 FPM.
- Indoor use only.
- ASME B20.1 compliant.

**SAFETY FEATURES**

The B Series Box Lift is the safest small modular package lift on the market. Its safety elements include exclusive spring-loaded dual safety pins to prevent uncontrolled descent in case of chain failure, electro-mechanical door interlocks, full-height safety enclosures, and overload protection.

**SAFETY ENCLOSURES / GATES**

Standard units include interlocked swing gates, and full-height enclosures on all sides. See page 23 for additional information.

**GENERAL**

Principal components of the B Series are modular steel enclosure frame, mechanical drive assembly and lift carriage.

**STRUCTURE**

Stackable modular-formed steel panels provide full-height guarding, and internal guide for carriage assembly. Gate arrangement can be easily changed for right-hand or left-hand swing open pattern.

**OPERATION**

Carriage is lifted and lowered by dual roller chains connected to electric motor-reducer assembly. Motor-reducer assembly is mounted within lift enclosure at floor level, with easy-access door for maintenance.

**ELECTRICAL**

Standard power requirements are 230V single-phase or 230V/460V 3-phase. Low voltage controls. NEMA 12 rated momentary contact push button stations are provided for each level and include mushroom head E-stop. Quick-connect wiring is provided, and ships partially pre-wired to expedite installation.

**DURABILITY**

- Lifts loads up to 500 lbs.
- Standard carriage size is 3’ x 3’.
- Vertical rise up to 15’ 9”.
- 30” above floor loading position.
- Standard travel speed is 30 FPM.
- Indoor use only.
- ASME B20.1 compliant.

- Design allows loading and unloading from one of three sides at each level.
- Integral access gates provided at each level and interlocked with lift operation.
- Mechanical motor, electrical components and gear reducer located at base of unit; access panel creates ease of maintenance.
- Unit ships in modular sections pre-wired with “quick connect” wiring.
- Pre-assembled shipment is available, saving time and money on installation.

**SAFETY FEATURES**

The B Series Box Lift is the safest small modular package lift on the market. Its safety elements include exclusive spring-loaded dual safety pins to prevent uncontrolled descent in case of chain failure, electro-mechanical door interlocks, full-height safety enclosures, and overload protection.

**SAFETY ENCLOSURES / GATES**

Standard units include interlocked swing gates, and full-height enclosures on all sides. See page 23 for additional information.
DB SERIES | PACKAGE HANDLING LIFT

Transports loads to mezzanines, between floors or between conveyor levels. Ideal for high-speed applications that require lifting boxes, cartons, packages, totes, containers or cases.

- Lifts loads up to 100 lbs.
- Standard carriage size is 3’ x 3’.
- Standard travel speed is 60 FPM.
- Indoor use only.
- Loading and unloading accessible from three sides.

- Saves space by handling loads often transported on an inclined conveyor.
- Smooth, quiet counterweight lifting mechanism minimizes horsepower requirements and saves energy.
- Completely self-contained, self-supporting and economical.
- Durable, high-quality materials and design ensure safe, reliable long-term performance.

GENERAL
Principal components of the DB Series are guide columns, carriage and mechanical actuating mechanism. All components are pre-assembled for ease of installation.

STRUCTURE
Frame is constructed of structural steel, and designed to be self-supporting. Carriage is typically supplied with powered roller conveyor deck. Carriage is a cantilever design, and can be loaded from any of three operating sides, depending on the application.

OPERATION
Carriage is lifted and lowered by dual chains connected to electric motor-reducer assembly. Power unit employs a fractional HP brake motor mounted to top of lift frame.

ELECTRICAL
Standard power requirements are 230V/460V, 3-phase. Control voltage is 110VAC. Standard push button stations and control panel are NEMA 12 rated. Control panel is designed to be mounted to back of frame; all control devices are pre-wired by manufacturer. A variety of control options are available, from basic interface to PLC automated controls.

SAFETY FEATURES
Travel of the carriage is controlled by a limit switch. When the switch is tripped or power is lost, the motor shuts off and the mechanically-actuated brake is engaged. Overload and carriage over-travel protection is provided.

SAFETY ENCLOSURES / GATES
Standard units include integral, full-height enclosures on all sides made of 1/2” expanded metal. See page 23 for additional information.

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Innovative product designs ensure safe loading and unloading for workers and materials.

Enclosures Built to Protect and Last
- PFlow standard panels are 6" to 5' wide.
- Panels are painted PFlow Blue. Custom paint colors available upon request.
- All mounting hardware included.
- Non-standard sizes, custom finishes and galvanized panels available upon request.

Required Design Standards for Lifts and Gates
All accessible sides of a unit not used for loading or unloading must be protected by enclosures at least 8' high, and capable of rejecting a ball 2" in diameter at each level. Any combination of shaftways, walls or permanent enclosures that provide equivalent protection is acceptable. If lift service is to the edge of a mezzanine or balcony, only minimal enclosures are required because the equipment is guarded by location.

Fire Code Requirements
If a floor is penetrated, contact your insurance company or local fire authorities to determine if a fire-rated enclosure is required.

Optional Visual Safety Barrier
Additional safety at uppermost level can be provided when the access gate is open and the carriage is not present.

Shaftway Applications
When a VRC is penetrating floors that are rated due to fire breaks or environmental conditions, walls and doors configured by others to meet the required conditions may be required. The term typically used is “shaftway.” PFlow VRCs can regularly be found behind interlocked doors in new installations, or replacing freight and service elevators, ash lifts, dumbwaiters and other lifting devices.
Safety Features that Perform and Protect

Certified Safety Cams

• In the unlikely event of a lifting chain break, the safety cam will immediately and automatically rotate into position.
• Safety cams are mounted on the carriage and positioned between the flanges of the guide column.
• Spring-loaded and designed with a series of hardened teeth.

As the safety cams rotate into position, the downward pressure of the carriage forces them into the flanges of the guide columns, preventing carriage descent. When chain tension is returned to normal, the cams rotate back to their inoperative position, allowing the VRC to resume operation. On the M Series and F Series, slack or broken chain conditions are sensed by a switch on the chain tensioner assembly, which cuts power to the drive. All units should be fully inspected before resuming service.

DeckLock System (Optional)

• Protects workers, materials and machines by eliminating accidents caused by carriage drop.
• High-capacity DeckLocks automatically extend to prevent uncontrolled descent at critical upper levels.
• Ensures safe loading and unloading with a forklift.
• Prevents uncontrolled descent in the case of overload or brake malfunction during loading/unloading operations.
• Gate-operated mechanical, pneumatic and electric versions available.
• Can provide absolute positioning if required.

PFlow VRCs are built with a substantial safety factor, but inadvertent overload or lack of maintenance can result in dangerous, unintentional carriage descent. Mechanical VRCs depend upon spring-set brakes to maintain the carriage position. These brakes are sized to provide a minimum of 150% of maximum load capacity; however, wear and lack of brake maintenance can reduce that capacity. Overload of the carriage can cause brake slippage. The exclusive PFlow patented DeckLock system provides additional safety under these conditions.

DeckLock

This exclusive safety system protects workers, materials and machines by preventing uncontrolled carriage descent from upper levels due to overload or brake malfunction.

Quantum Drive

Exceptional performance, durability, increased capacity and faster speeds! This quantum leap in chain-driven technology features reduced vibration and less maintenance. Patent pending.

DeckLock System (Optional)

Optional, manually-actuated maintenance pins provide additional safety when performing service on the VRC. The pins extend under the carriage structure to provide one-way assurance that the VRC carriage is properly secured.

Maintenance Pins (Optional)

Note: Two means to secure the carriage is normally required.
Elevating Innovation Since 1977

We’ve designed custom lifts for everything ... from Truffles to Toyotas to Telescopes and more.

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