

# Vertical Lift System (VLS)

SHEET AND BAR STOCK  
HANDLING SYSTEMS



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**VERTICAL  
STORAGE  
UTILIZES  
UNUSED  
OVERHEAD  
SPACE**

**MADE IN  
NORTH  
AMERICA**

## VERTICAL LIFT SYSTEM

The Vidir **Vertical Lift System (VLS)** is an automated material handling and storage system designed for sheet metal and linear goods in industrial applications. It takes advantage of high ceilings, while implementing a goods-to-operator work-flow. The VLS is a smart investment, as it provides greater storage density over traditional racking. It makes use of otherwise unused vertical space, reduces retrieval times, and ultimately increases throughput.



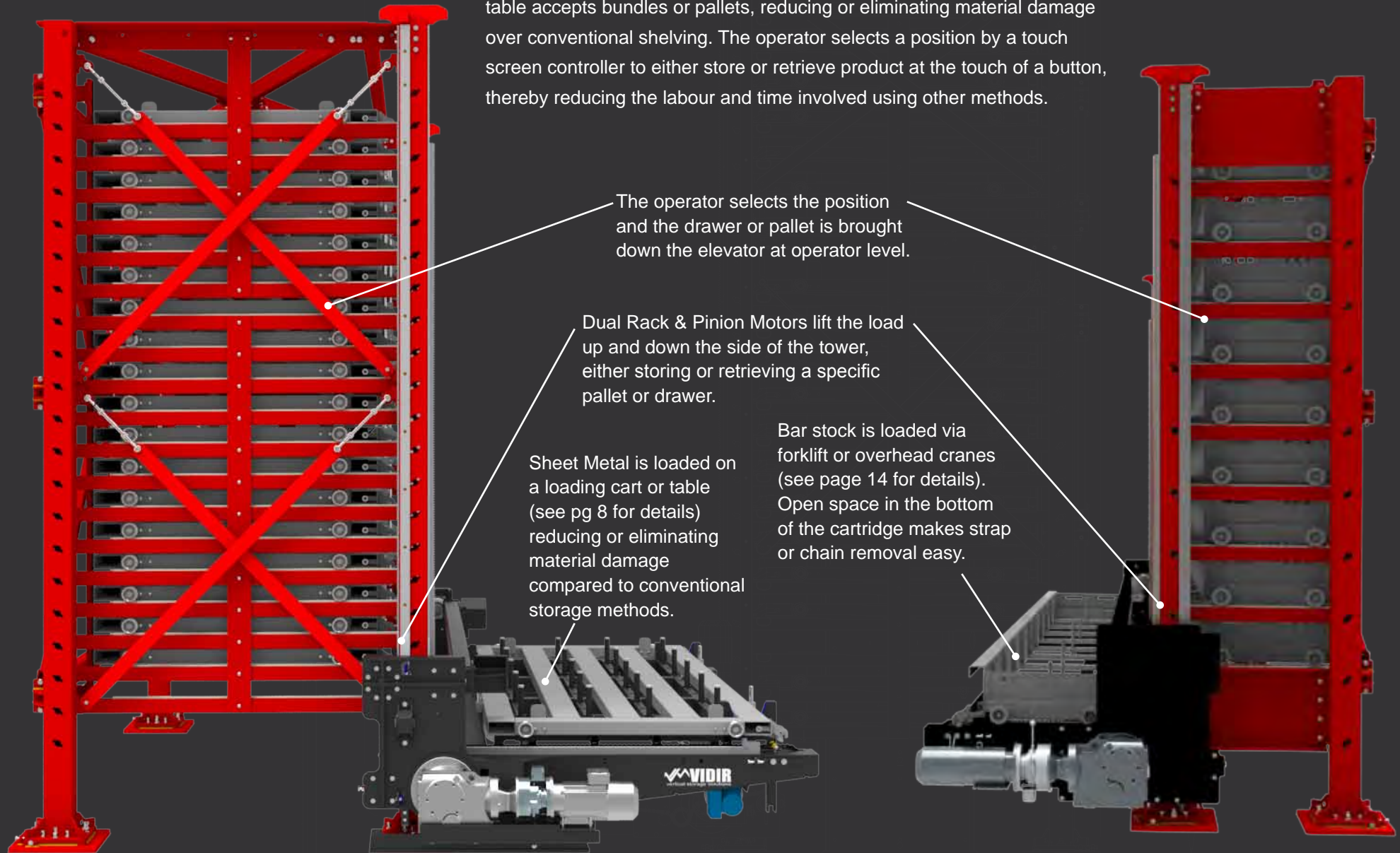
- *Saves floor space by utilizing overhead space*
- *Meets SIL3 / CAT4 / PLe safety standards*
- *Eliminates the need for forklifts during standard operation (operator, spotter, forklift)*
- *Quick access to material*
- *Reduce material changeover time by as much as 75%*
- *Contained storage environment prevents material damage*
- *Ergonomic design increases workplace safety and prevents injuries*
- *Improved productivity with more efficient SKU picking*





## HOW IT WORKS

The **VLS** uses an elevator to climb the front of the tower to deposit and retrieve drawers with loads weighing up to 5,000 lbs, and delivers them directly to ground level for further processing. Either a cart, or loading table accepts bundles or pallets, reducing or eliminating material damage over conventional shelving. The operator selects a position by a touch screen controller to either store or retrieve product at the touch of a button, thereby reducing the labour and time involved using other methods.





WORLDWIDE  
SUPPORT





## SHEET METAL VLS FEATURES

### Load Size\*

Fits standard 5' x 10' sheets  
Up to 5,000 lbs loads

### Spacing

Standard pallet heights  
of 3.5" and 5" available

### Access Restriction

Fencing around the perimeter  
and light  
curtains provide  
safe operation

### Emergency Stops

Located left  
and right  
of the tower

### Loading Table or Motorized Cart

For easy loading  
and unloading

### Safety System

Designed to SIL3 / CA14 / PL e

### Overhead Space

Fully maximizes overhead  
space for storage to recover  
valuable floor space

### Pallet Safety

Each pallet is individually  
locked in place until  
released by the elevator

### Overload Sensing

Elevator returns to the  
home position when  
overloaded

### Rack & Pinion Drive System

Precisely  
aligns and  
balances  
elevator  
automatically

### Braking System

Features a process  
brake and a  
redundant brake  
engaged with the  
safety system

### Motors

2 x SEW KAF87 5hp motors &  
1 x SEW KAF47 3/4 hp

### Controls

VLS operation controls  
featuring pallet selection  
and movable cart control



INDUSTRY  
LEADING  
UP-TIME

## SHEET METAL VLS SPECIFICATIONS

TECHNICAL SPECIFICATIONS	IMPERIAL	METRIC
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### ELEVATOR SPECIFICATIONS

Storage Width	120"	3,048 mm
Storage Depth	60"	1,524 mm
Max Height per Pallet	3.5"   5"	89 mm   127 mm
Max Load per Pallet	5,000 lbs	2,268 kg
Lifting Speed	22 ft/min	6.7 m/min
Push/Pull Drive	42 ft/min	12.8 m/min

### TOWER SPECIFICATIONS

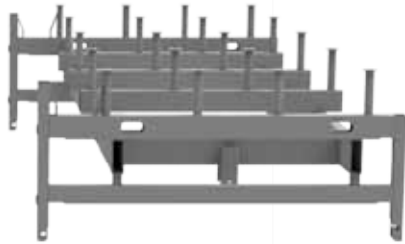
System Height	12' - 24'	3.65 m - 7.32 m
Loading Table	Optional	
Load/Unload Carts	Optional	

## SHEET METAL VLS CART CONFIGURATIONS

### DE-PALLETIZING SHEETS FROM SKIDS USING THE VIDIR LOADING TABLE

The Vidir loading table is the ideal accessory to the VLS as it aids the process of de-palletizing sheet metal from its wooden skids. The table consists of a series of movable pins that can be positioned across the table to fit properly in between the wood on a skid. Once the whole skid with the sheets is lowered onto the table the pins will hold the sheets up as the wooden skid falls down in between the pins. The sheets can then be easily lifted up with a forklift or crane while the wood can also be removed from the loading table.

1.



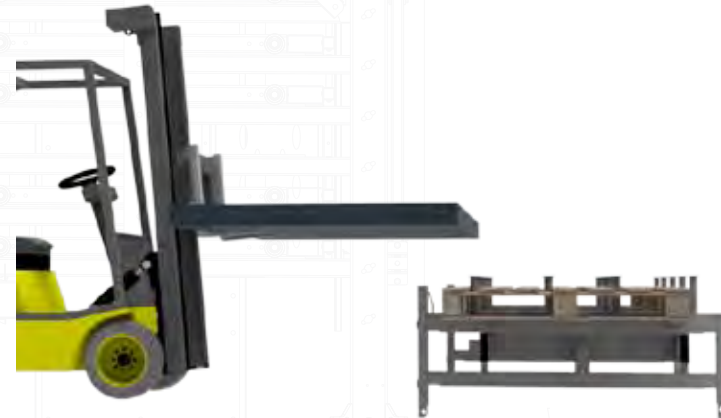
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3.



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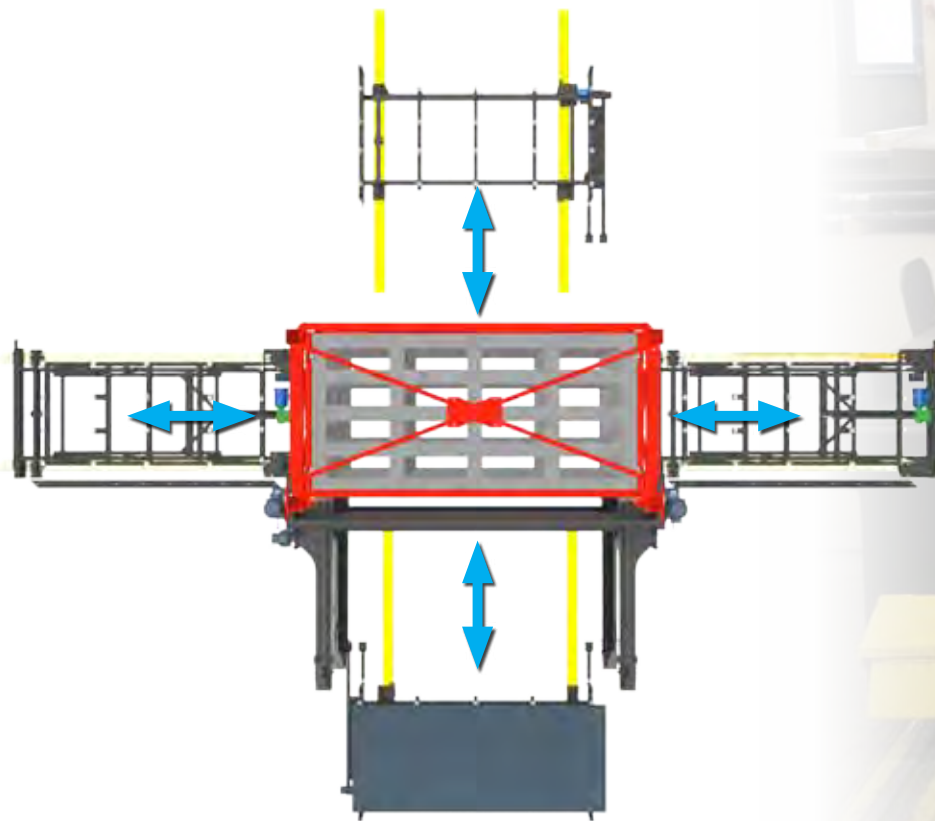




ERGONOMIC  
DESIGN  
INCREASES  
WORKPLACE  
SAFETY

## SHEET METAL VLS ACCESS POINTS

With access from all 4 sides, up to 2 carts per lift available, and 3 cart styles to choose from, the options for loading and feeding production machines can be adapted to most environments.

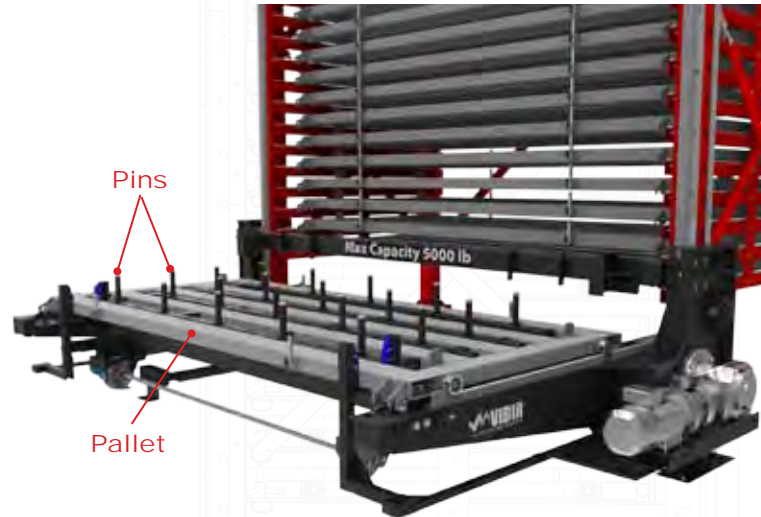


## SHEET METAL VLS HOW TO LOAD

1. Call empty pallet from tower to go onto the loading table.



2. The lift will lower the pallet onto the table allowing the pins on the table to go through the open spaces of the pallet.



3. With the lift fully lowered, the sheet metal is lowered onto the pins with the lift.

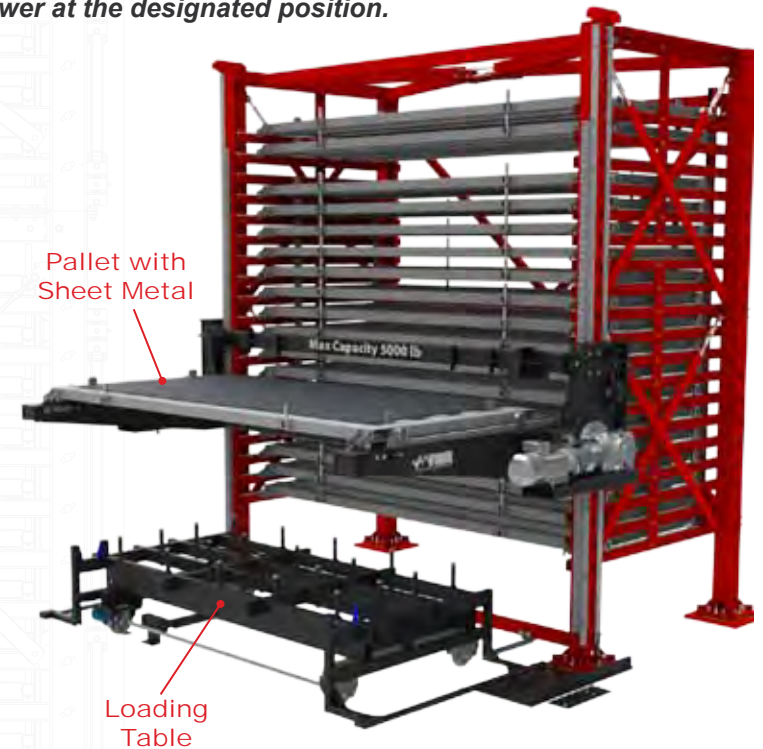




## REDUCE RETRIEVAL TIME

d, the loading cart pins will protrude 5" above the surface of the pallet. Now the sheets can be  
a forklift or overhead crane.

4. The lift raises the pallet, lifting the sheets from the pins, and  
continues to raise the pallet and sheets to place them in the  
tower at the designated position.



## BAR STOCK VLS FEATURES

### Overhead Space

Fully maximizes overhead space for storage to recover valuable floor space.

### Load Size

Up to 5,000 lbs loads

### Semi-Open Drawer Bottoms

Lower load in using straps

### Access Restriction

Fencing around the perimeter and light curtains prevent access during operation

### Emergency Stops

Located left and right of the tower

### Motors

2 x SEW KAF87 5hp motors &  
1 x SEW KAF47 3/4 hp

### Controls

Touch screen controller featuring drawer selection

### Safety System

Designed to SIL3 / CA14 / PL e

### Overload Sensing

Elevator returns to the home position when overloaded

### Drawer Safety

Each drawer is individually locked in place until released by the elevator

### Variety of Drawer Sizes

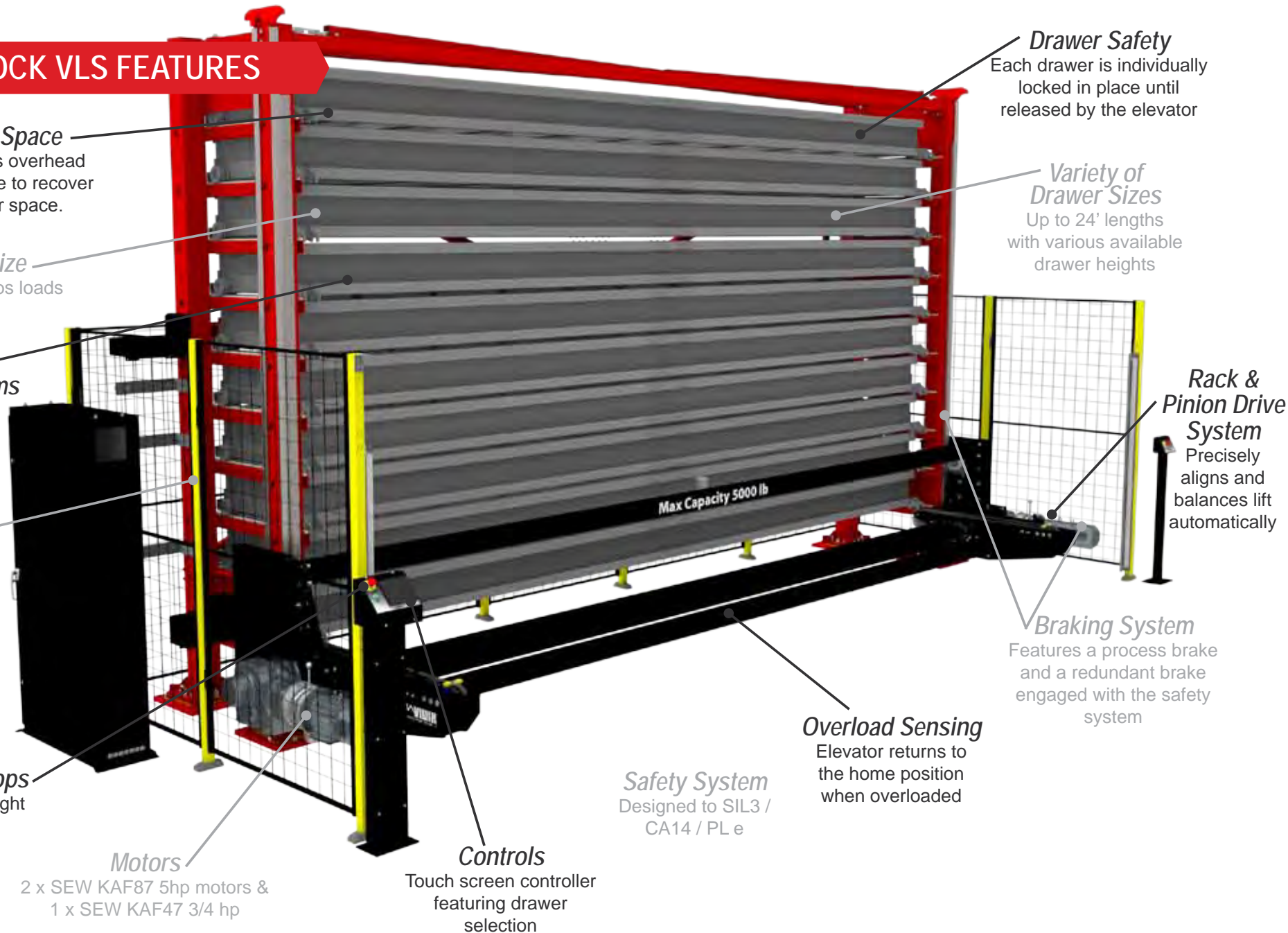
Up to 24' lengths with various available drawer heights

### Rack & Pinion Drive System

Precisely aligns and balances lift automatically

### Braking System

Features a process brake and a redundant brake engaged with the safety system





MAXIMUM  
STORAGE  
DENSITY

## BAR STOCK VLS SPECIFICATIONS

### TECHNICAL SPECIFICATIONS

### IMPERIAL

### METRIC

#### ELEVATOR SPECIFICATIONS

Storage Width	120" - 294"	3048 mm - 7468 mm
Storage Depth	24"	610 mm
Max Height per Drawer*	10" - 18"	254 mm - 457 mm
Max Load per Drawer	5,000 lbs	2268 kg
Lifting Speed	22 ft/min	6.7 m/min

#### TOWER SPECIFICATIONS

System Height	12' - 28'	3.65 m - 8.5 m
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\*Additional sizes available.

## BAR STOCK VLS HOW TO LOAD

**1. Load** an empty drawer on the elevator and return to home position.



**2. Load** the bar stock material in the drawer using a forklift or overhead crane.



**3. Remove** straps or chains from the bar stock bundle via the openings in the bottom of the drawer.



**4. Direct** the elevator to the desired position.





## BARSTOCK VLS DRAWER FEATURES

The Vertical Lift for bar stock and linear materials is adaptable, and can accommodate a multitude of sizes and applications. The drawers are designed to accept linear objects such as bar stock, pipes, and beams. They can also accept custom inserts to accommodate materials of varying dimensions.



PREVENT  
MATERIAL  
DAMAGE

## SIDEWALL SPACER

The Bar Stock VLS drawers are lined with internal sidewall spacers to offset the stock material away from the inside of the drawer walls. These spacers allow the operator to be able to release or tie slings easily around the material for loading and unloading.

## DIVIDER PINS

Movable pins are available to be used as partitions to organize and separate the material in the drawers. Each drawer can be divided into 4 compartments.

## REMOVABLE SIDE PANEL

The side ends of the drawer can be removed to give an ergonomic side access to the stock material. This access facilitates the manual unloading of single stock pieces onto cutting lines.



## SECURITY & SAFETY

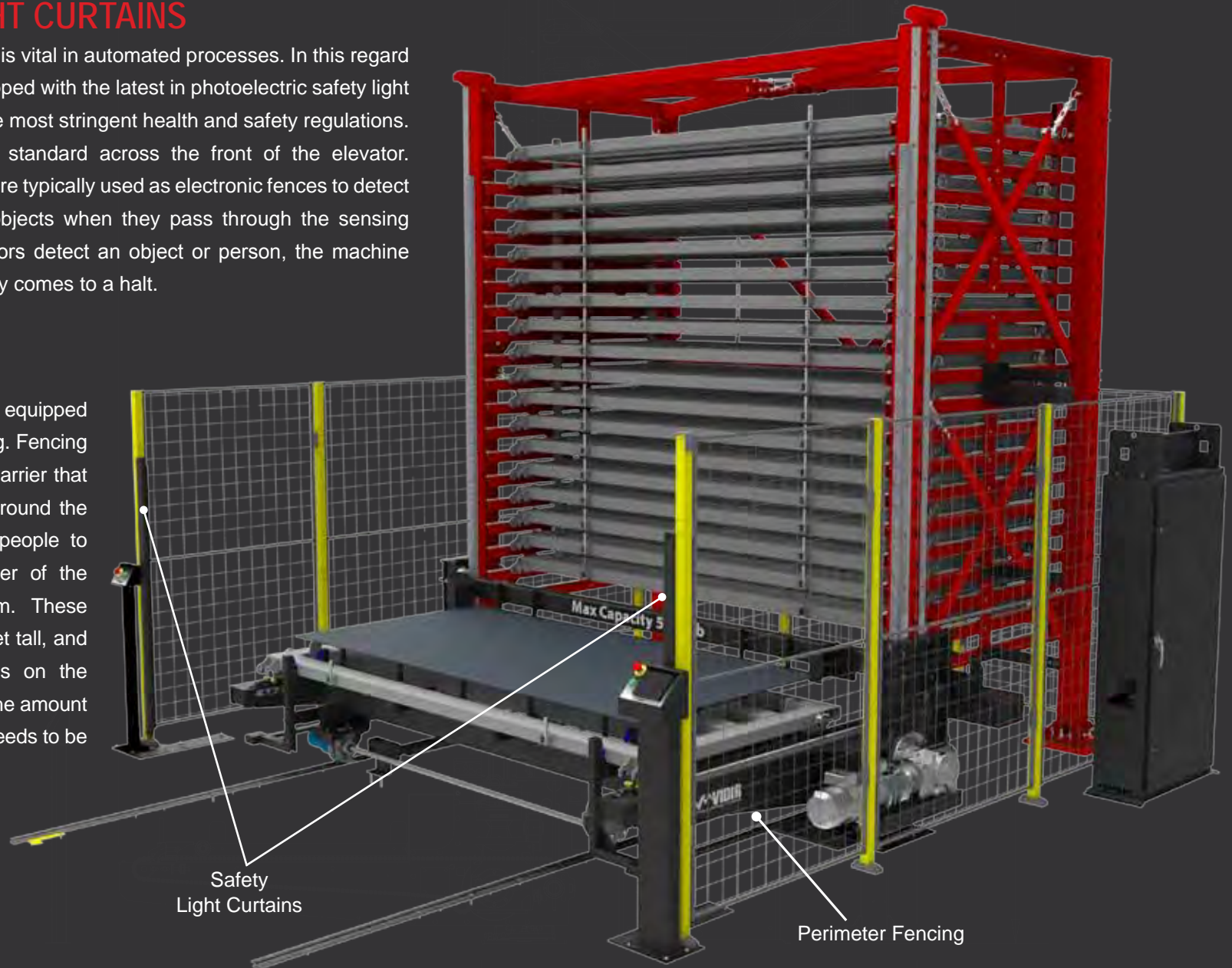


### SAFETY LIGHT CURTAINS

Personnel protection is vital in automated processes. In this regard the Vidir VLS is equipped with the latest in photoelectric safety light curtains that meet the most stringent health and safety regulations. Light curtains come standard across the front of the elevator. Safety light curtains are typically used as electronic fences to detect personnel or large objects when they pass through the sensing field. Once the sensors detect an object or person, the machine operation immediately comes to a halt.

### FENCING

The Vidir VLS comes equipped with perimeter fencing. Fencing provides a physical barrier that closes off the area around the VLS itself, allowing people to see the set perimeter of the work cell or system. These cages are several feet tall, and their design depends on the application and the amount of area around that needs to be safeguarded.



Safety  
Light Curtains

Perimeter Fencing



SAFE  
HANDLING  
WITH EASY  
ACCESS



## OPTIONS & ACCESSORIES



### SELF PROPELLED LONGITUDINAL INPUT/OUTPUT STATION

Cart that travels forward/reverse in front of the VLS to either receive material or feed sheet lasers. Features a zero corner for automated pickup by production machines.



### SELF PROPELLED LATERAL INPUT STATION

Cart that can access the VLS from either side or the rear. Can travel up to 30' and features retractable pegs for ease of use with fork trucks and a zero corner for automated pickup by production machines.



### PREVENTATIVE MAINTENANCE

An annual inspection program designed to extend the life of your vertical lift.



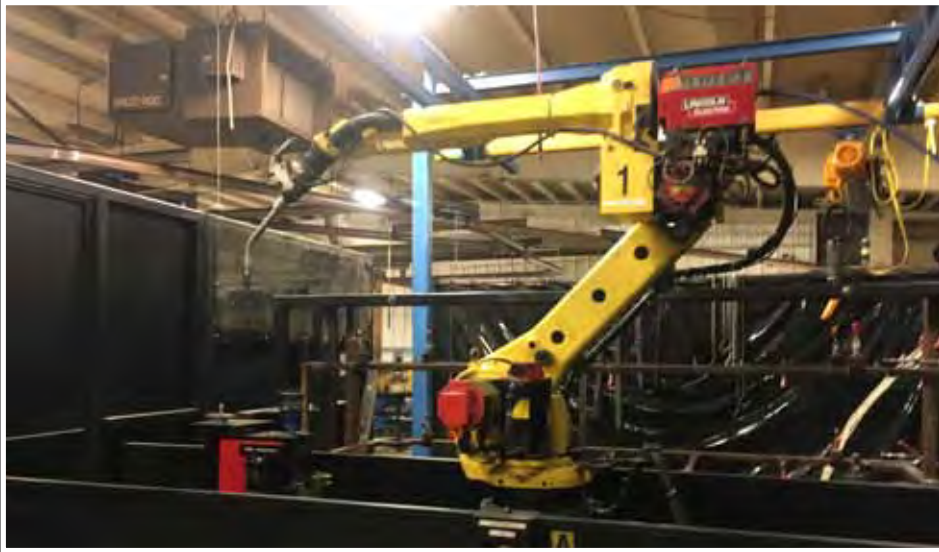
## RAL COLOR CHANGE

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RAL color changes are available.

**Max Capacity 5000 lb**

**EFFICIENT  
PROCESSING IN  
INDUSTRY AND  
DISTRIBUTION**

## ABOUT VIDIR



*Vidir* is a leading manufacturer and worldwide supplier of automated vertical storage and material handling systems. Vidir's vertical storage designs are versatile and flexible accommodating materials with diverse profiles ranging from rolled goods applications to printing plates. By altering the carrier design, we've developed models for storing tires, garments, cylinders, and manufacturing items like small parts and bar stock. To further optimize your use of space, Vidir's engineering staff can customize and adapt our standard line of carousel products for your specific storage and retrieval needs.



Installations in  
over 40 countries  
worldwide



40,000 +  
global installations



Industries served:  
Manufacturing, Aerospace,  
Automotive, Retail, Healthcare,  
Warehouse/Distribution and  
many more.



## VERTICAL STORAGE BENEFITS

### **More Space**

Recovers average of 80% of your floor space.

Reclaim forgotten vertical space.

More inventory in less space.

### **Safety**

Reduces the need for lifting, climbing and reaching.

Carts & Dollies available for easy loading and unloading of heavy product.

### **Efficiency**

Helps increase inventory turns and drive costs out.

### **Ergonomic**

Delivers product directly to operator at an ergonomic height.

No bending, lifting, stretching necessary.

### **Productivity**

Faster material throughput helps improve productivity.



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Products Safely Accessible



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