

Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Minnesota - Getting items from one warehouse location to another and to and from the loading docks is the focus of warehousing. Focus is often on space saving tools and the layout of the building. Narrow aisles need specific solutions to allow goods to be accessed and stored properly. More space can be given to storage as less space is needed for accessing the aisle. Warehouse optimization consists of warehouse configurations. Warehouse Optimization Implementing very narrow aisle warehouse optimization is a huge benefit of warehouse optimization. One of the most important benefits is the increased storage space. Using narrow forklift trucks instead of traditional forklifts can enable the warehouse width of the aisles can be lessened to half. Many very narrow aisle forklifts offer greater stack height capability which further increases the storage capacity per square foot. This means that costs are decreased because less warehouse space is necessary for the same amount of stock than if a standard aisle configuration were used. Square footage is costly in urban areas and any way to reduce warehousing costs can save a company money. When planned carefully and properly, it is possible to increase warehouse storage area by up to 80 percent by implementing a very narrow aisle width configuration. Very narrow aisle design facilitates greater product access and more rack faces. This usually equates to less travel time gathering and storing product as more product is located within a smaller, more accessible area. Very narrow aisle layouts and narrow aisle layouts are popular for warehouses. Narrow aisles are measured as those that use fewer than eleven feet of aisle width. These widths reduce even further to roughly 6.5 feet for very narrow aisles. Storage options are greatly increased with these aisle width options. Using a forklift for order picking and stocking can be difficult in these aisle widths, especially when turning. These challenges are met by using very narrow forklifts to gain access and complete tasks. It is necessary to know the dimensions of the aisle when selecting a forklift for a certain job. Taking note of the proper dimensions will save valuable time and money by avoiding the mistake of acquiring a forklift that will not work in the intended application. It is essential to take any columns, posts or utilities into account before deciding a type of narrow aisle forklift design as these can block access. Very Narrow Aisle Forklift Trucks Rechargeable batteries are typical for powering very narrow aisle forklift trucks and most models are electric. Very narrow aisle forklift trucks are popular as stand-up riders to help increase operator comfort and productivity. The most commonly used types of very narrow aisle forklift trucks are: 1. Reach trucks 2. Order pickers; 3. End-control riders; and 4. Turret or swing-mast. Reach Forklift Trucks The reach trucks were created as a type of rider stacker forklift but can be modified specifically for narrow aisle usage. The reach trucks developed their name from their forward-reaching actions to get a load. The moving mast and the moving carriage are two types of reach trucks. The moving carriage functions by lowering and raising the carriage and the operator. While the operator stays at ground level, the moving mast is responsible for raising and lowering the forks. The moving mast reach truck is generally considered the safer of the two types of reach trucks. Reach trucks utilize a pantograph system that is a jointed framework design enabling the driver to place and reach loads without moving the forklift. Order Pickers Order pickers were created to specifically pick orders from difficult-to-access racks. Order pickers are specific for lighter stock items that can be lifted by hand. Order pickers elevate the operator to the level of goods to pick and identify particular items required for filling an order. End-Control Riders End-control riders are machines that pick loads up at floor level and move the items horizontally as opposed to lowering or lifting over numerous heights. Turret or Swing-Mast Forklift Swing-mast or turret very narrow aisle forklifts feature an articulating swivel mast that pivots. Pallets can be set on either the right or left side of the forklift due to the machine's ability to use its' swinging mast. Guided Very Narrow Aisle Trucks Many very narrow aisle forklift trucks are able to be guided down aisles by wire or rail. Because the forklift is guided, thereby reducing the possibility of the forklift bumping racks while moving down the aisle, the aisles can be extremely narrow. For rail-guided systems, a series of rails are installed into the floor, on both sides of

the aisle, and run along the floor for the length of the aisle, curving around the end of the aisle. Wheel guides on the forklift slide into the floor rails to stop the machine from traveling out of bounds. Wire-guidance forklift systems install wires on the floor instead of rails and the wires run down the middle of the aisle. Narrow aisle forklifts rely on a wire-guide system to help it communicate with the floor wires. This allows the machine to be steered by the wires, stopping it from traveling outside of the specific location.

Work Site Considerations There are a few critical considerations when implementing a very narrow aisle configuration. Because these very narrow aisle configurations include very tall racking systems, the condition of the floor and the construction of the racks must be done properly in order to avoid potentially disastrous outcomes. There are four main locations that need to be ideally prepared before any racking system can be installed. These areas need to be monitored continuously including fixing cracks in the floor, ensuring the racks are straight, a level floor and an appropriate load capacity of the floor.

Level Floor Due to the racking system height, any minor floor slope can gravely impact how plumb the racks are, particularly over time if loads are placed and removed repeatedly on the racks. The height of the racking system means that any minute floor slope can have a negative impact on how straight the racks are, especially over time when loads are continually removed and placed on the racks. Without a level floor foundation, the rack stability could be compromised.

Crack Repair Cracks in the floor ideally should be fixed once they are noticed to ensure everyone's safety. Safety can become compromised when flooring cracks become 3/8 inches wide. They require proper filling with a substance that is as hard as the floor.

Floor Load Capacity Minimum flooring requirements must be met before considering a narrow aisle installation. The floor should have three thousand psi concrete minimum and contain evenly distributed rebar at three to four inches under the surface. Extra reinforcements might be needed depending on the load requirements and the configuration.

Plumb Racks The racking system is essential to the whole process and needs to be installed properly. There is a major chance of rack failure if improper installation occurs. All racks need to be plumb and this is one of the most vital aspects of correct installation. Rack shims can help the rack stay plumb to one inch at the height of thirty feet. Racking failure can happen if the aforementioned measures are not taken or implemented correctly. Racking failure can kill or injure employees, damage equipment and result in horrible damage. Because of these reason, these measures are the most important part of implementing a narrow aisle configuration for warehousing optimization.