

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Everett - Warehousing solutions often focus on layout and space saving solutions in order to cut down on costly square footage and decrease travel time required to transport goods throughout the warehouse and loading dock areas. 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. Configuring the warehouse is known as warehouse optimization. Warehouse Optimization There are several significant benefits of implementing very narrow aisle warehouse optimization. Since very narrow forklift trucks have been designed to take up significantly less space, warehouse aisle widths can be reduced to half the width needed by traditional forklifts. Numerous narrow aisle forklifts deliver better stacking heights to increase the storage capacity on a square foot basis. Very narrow aisle forklifts can greatly reduce costs compared to traditional forklifts since the same amount of stock takes up less space in the warehouse. Square footage is costly in urban areas and any way to reduce warehousing costs can save a company money. Warehouse storage can be increased up to eighty percent with careful planning when a narrow aisle width configuration is utilized. In addition, a very narrow aisle layout allows for more rack faces as well as better access to products. Since greater quantities of products are situated in a more accessible area, there is less travel time needed for gathering and storing items. Warehouse layouts usually utilize a narrow aisle or very narrow aisle plan. Narrow aisles are measured as those that use fewer than eleven feet of aisle width. Very narrow aisles reduce the aisle width further to around six-and-a-half feet. Either of these widths drastically increases storage potential. However, they also create challenges when turning within the aisles using forklifts for stocking and order picking. A variety of very narrow forklifts have been designed to easily maneuver in narrow aisles. It is necessary to know the dimensions of the aisle when selecting a forklift for a certain job. Having the right aisle dimensions will save money and time instead of purchasing the wrong forklift that won't be able to conquer the applications. 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 As these units are mostly powered by electricity, rechargeable batteries are popular for very narrow aisle forklifts. Stand-up riders are a popular design for very narrow aisle forklift trucks. There are different very narrow aisle forklift designs such as order pickers, reach trucks, wing-mast or turret and end-control riders. Reach Forklift Trucks Reach trucks were designed as a version of the rider stacker forklift but specially modified for use in narrow aisles. This machine earned its name by its ability to reach its forks to secure 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. The moving mast raises and lowers the forks as the operator remains at ground level. The moving reach truck is typically considered the safest out of the two kinds of reach trucks. These machines rely on a kind of jointed framework known as a pantograph system that enables the operator to place a load or reach the load without moving the machine. Order Pickers Order pickers have been created to pick items from difficult, high racking systems. 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 The turret or swing mast very narrow aisle forklifts have a swivel mast that pivots and articulates. 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. The wire-guidance system requires that the wires be installed into the floor, along the center of the aisle. These wire-guides work along the same principle as the rail guards except that the narrow aisle forklift is fitted with a wire-guide system that allows it to communicate with the floor wires which effectively steer the forklift, preventing it from straying outside of an allotted range.

**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. Four specific areas need to be perfectly prepared before a racking system can be implemented including a level floor, plumb racks, any floor cracks need to be repaired and the floor's load capacity must be accurate. These locations need to be maintained and monitored continuously.

**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. A level floor is vital for the safety and integrity of the operator, employees, stock and the warehouse.

**Crack Repair** When cracks in the floor are spotted, they should be assessed and, when necessary, repaired immediately. Cracks may affect the floor's level and, when they are approximately 3/8 inches wide, will need to be properly filled with a material at least as hard as the surrounding floor.

**Floor Load Capacity** The floor needs to meet specific minimum requirements prior to a narrow aisle configuration. At a minimum, the floor should consist of 3,000 psi concrete as well as contain evenly distributed rebar approximately 3 to 4 inches below the surface. Depending on the configuration and load requirements, extra reinforcements may be necessary.

**Plumb Racks** The racking system is essential to the whole process and needs to be installed properly. If installed improperly, there is a great chance of rack failure. Every rack needs to be plumb to ensure a safe system and work environment. Rack shims are recommended to make sure the racks are plumb within one inch at the thirty-foot rack height. If the above measures are not taken or are improperly implemented, it is likely to cause a racking failure. Racking failure can kill or injure employees, damage equipment and result in horrible damage. Because of these reasons, these measures are the most important part of implementing a narrow aisle configuration for warehousing optimization.