

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Gresham - 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. Extremely narrow aisles offer more storage space since there is less space needed for aisle access. Configuring the warehouse is known as warehouse optimization. Warehouse Optimization Several benefits can be enjoyed for adding very narrow aisle warehouse optimization such as more storage space for the facility. 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. Costs can be drastically decreased with a narrow aisle forklift compared to a standard aisle configuration as less warehouse space is required for the same quantity of stock. Square footage is costly in urban areas and any way to reduce warehousing costs can save a company money. Adding a very narrow aisle width system can increase storage up to eighty percent when planned properly. This warehouse design creates more rack faces and increased product access. 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 usually those that use less than 11 feet of aisle width. Very narrow aisles reduce the aisle width further to around six-and-a-half feet. Both of these aisle widths provide significantly increased storage opportunities. Standard forklifts can have issues with turning in these aisle widths. To meet these challenges, several different types of very narrow forklifts have been specially developed for various types of tasks to allow easier maneuvering in narrow aisle widths. 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. Finally, it is critical that any utilities, posts or columns are taken into account before settling on a specific narrow aisle forklift design as these may affect access to aisles by some forklifts or prevent warehouse optimization.

**Very Narrow Aisle Forklift Trucks** Very narrow aisle forklift trucks are almost always powered electrically, usually by rechargeable battery. These very narrow aisle trucks are more commonly available as stand-up riders, which helps increase productivity and operator comfort. 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. It got its name by its function of reaching its forks forward to get to a load. The two kinds of reach trucks the moving carriage and the moving mast. The moving carriage works by raising and lowering the carriage, along with 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 use a pantograph system, a type of jointed framework, which allows the operator to reach for or place a load without the need to move the forklift itself.

**Order Pickers** Order pickers have been created to pick items from difficult, high racking systems. These machines are used for picking up lighter stock that can be moved by hand. They lift the operator up to reach the goods by identifying and choosing certain items to create 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. The mast swivels allowing pallets to be placed on either the left or right of the forklift.

**Guided Very Narrow Aisle Trucks** Rail or wire can guide the very narrow aisle forklift trucks down the aisle securely. Thanks to the guide rails, the possibility of crashing into racks is greatly reduced. In rail-guided models, sets of rails are placed into the floor on each side of the aisle. They run the length of the aisle and also curve around the

aisles' edge. 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. There are four areas which must be meticulously prepared before setting up a racking system and must be continuously monitored and maintained throughout the operation of the warehousing system:

1. The floor must be level;
2. Cracks must be repaired;
3. Load capacity of floor must be appropriate; and
4. The racks must be plumb.

**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. 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** The floor should meet certain minimum requirements before considering a narrow aisle configuration. Minimum flooring requirements include concrete measuring three thousand psi and rebar distributed evenly three to four inches below the surface. Extra reinforcements might be needed depending on the load requirements and the configuration.

**Plumb Racks** Installing the racks safely and correctly is vital for the entire system. Rack failure can happen if they are improperly installed. One of the most important details to ensure proper installation, is that all racks are plumb. Rack shims can help the rack stay plumb to one inch at the height of thirty feet. If the above measures are not taken or are improperly implemented, it is likely to cause a racking failure. Such failure is likely to result in costly damage to goods, the warehouse facility, forklifts and, worst of all, employees could be significantly injured or even killed. Because of these reason, these measures are the most important part of implementing a narrow aisle configuration for warehousing optimization.