

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Costa Mesa - 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. Certain models of very narrow aisle forklifts can increase the square foot storage capabilities by delivering greater stacking heights. 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. In most urban areas where square footage is very costly, this is a huge benefit to warehouse operations. Adding a very narrow aisle width system can increase storage up to eighty percent when planned properly. In addition, a very narrow aisle layout allows for more rack faces as well as better access to products. 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. 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. However, they also create challenges when turning within the aisles using forklifts for stocking and order picking. 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. When selecting a forklift for a job application, it is essential to know the aisle dimensions. 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. Taking note of any utilities, columns or posts is necessary before choosing a particular narrow aisle forklift design to maximize warehouse optimization and safety. 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 Developed as a kind of rider stacker forklift, the reach forklift trucks can be configured for narrow aisle locations. 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. The moving mast works by raising and lowering the forks along the mast, while the operator stays at ground level. Of the two kinds of reach trucks, the moving mast reach truck is the safer of the two varieties. 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 were created to specifically pick orders from difficult-to-access racks. 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 can pick up loads along the floor level and transport goods horizontally instead of transporting items over heights. Turret or Swing-Mast Forklift Turret or swing-mast very narrow aisle forklift have a pivoting articulating swivel mast. The mast swivels allowing pallets to be placed on either the left or right of the forklift. Guided Very Narrow Aisle Trucks Very narrow aisle forklift trucks can be guided by rail or wire down the aisles. 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.

Rail-guided applications use special rails set into the floor on either side of the aisle, funning the length of the location and curving around the edge. Specific wheel guides are on the forklift. These slide into the rails to stop the forklift from moving out of the rail guards. Running down the center of the aisle, wire-guidance forklifts rely on floor wires instead of rails. 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 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** Because of the height of the racking systems, any slight slope of the floor is likely to negatively affect the plumbness of the racks, especially over time when loads are continuously placed and removed 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** The floor should meet certain minimum requirements before considering a narrow aisle configuration. The floor should have three thousand psi concrete minimum and contain evenly distributed rebar at three to four inches under the surface. Depending on the load requirements and configuration, additional reinforcements may be needed.

**Plumb Racks** Of great importance is the proper installation of the racking system. If installed improperly, there is a great chance of rack failure. 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. 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.