

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Washington - 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. Warehouse optimization consists of warehouse configurations. Warehouse Optimization There are several significant benefits of implementing very narrow aisle warehouse optimization. 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. In most urban areas where square footage is very costly, this is a huge benefit to warehouse operations. 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. In addition, a very narrow aisle layout allows for more rack faces as well as better access to products. Reduced travel time for storing items and gathering products are some of the key benefits to this warehouse layout as more products are found in an accessible location. 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. Either of these widths drastically increases storage potential. Using a forklift for order picking and stocking can be difficult in these aisle widths, especially when turning. 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. 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. 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 Rechargeable batteries are typical for powering very narrow aisle forklift trucks and most models are electric. These very narrow aisle trucks are more commonly available as stand-up riders, which helps increase productivity and operator comfort. 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 Developed as a kind of rider stacker forklift, the reach forklift trucks can be configured for narrow aisle locations. It got its name by its function of reaching its forks forward to get to a load. There are two types of reach trucks: the moving mast and the moving carriage. 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. Of the two kinds of reach trucks, the moving mast reach truck is the safer of the two varieties. 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 designed and developed specifically for use in picking orders from high, typically hard-to-reach 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. The mast swivels to enable pallets to be positioned on the right or left side of the forklift. Guided Very Narrow Aisle Trucks Many very narrow aisle forklift trucks are able to be guided down aisles by wire or rail. Since the forklift truck is guided, the

chance of colliding with racks while traversing down the aisles is very low. 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. Specific wheel guides are on the forklift. These slide into the rails to stop the forklift from moving out of the rail guards. The wire-guidance system requires that the wires be installed into the floor, along the center of the aisle. The wire-guides function similarly to the rail systems except the forklift has a wire-guide system to prevent the machine from traveling where it is not supposed to.

### Work Site Considerations

Certain essential considerations need to be dealt with before using a 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. 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

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. Depending on the load requirements and configuration, additional reinforcements may be needed.

#### 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. Employees can become hurt or killed in the event that racking failure occurs. Goods can be damaged along with forklifts and other equipment. Due to these potential problems, the most significant part of creating a narrow aisle configuration for warehousing optimization is the initial measurements.