

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift San Jose - 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 Several benefits can be enjoyed for adding very narrow aisle warehouse optimization such as more storage space for the facility. 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. 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. In most urban areas where square footage is very costly, this is a huge benefit to warehouse operations. Warehouse storage can be increased up to eighty percent with careful planning when a narrow aisle width configuration is utilized. This warehouse design creates more rack faces and increased product access. 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 usually those that use less than 11 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. 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. 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. Very narrow aisle forklift trucks are popular as stand-up riders to help increase operator comfort and productivity. 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 two kinds of reach trucks the moving carriage and the moving mast. The moving carriage works by raising and lowering the carriage and the driver. The moving mast works by raising and lowering the forks along the mast, while the operator stays 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 designed and developed specifically for use in picking orders from high, typically hard-to-reach 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** 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** Very narrow aisle forklift trucks can be guided by rail or wire down the aisles. 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. 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. 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. The narrow aisle units feature tall racking systems. The floor construction and the racks need to be carefully taken into account for everyone's safety. 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** 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. 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. 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. 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. 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 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. 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 reasons, these measures are the most important part of implementing a narrow aisle configuration for warehousing optimization.