

Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Palmdale - 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 Implementing very narrow aisle warehouse optimization is a huge benefit of warehouse optimization. One of the most important benefits is the increased storage space. 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. 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. Most urban locations have expensive square footage; therefore, reducing costs is a benefit to warehouses and their business. 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. 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. It is common for warehouses to use a very narrow or narrow aisle layout. 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. Storage options are greatly increased with these aisle width options. However, they also create challenges when turning within the aisles using forklifts for stocking and order picking. These challenges are met by using very narrow forklifts to gain access and complete tasks. Before choosing a forklift for a particular job, it is vital to know the dimensions of the aisle. 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 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. It got its name by its function of reaching its forks forward to get to 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. 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 utilize a pantograph system that is a jointed framework design enabling the driver to place and reach loads without moving the forklift. **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 used to pick loads located at floor level and transport the load horizontally, rather than lift or lower loads from various heights. **Turret or Swing-Mast Forklift** Turret or swing-mast very narrow aisle forklift have a pivoting articulating swivel mast. 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** 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. Wheel guides on the forklift slide into the floor rails to stop the machine from traveling out of bounds. Wire-guidance forklift systems install wires on the floor instead of rails and the wires run down the middle 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. 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. 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. Without this foundation of a level floor, the stability of the racks could be jeopardized.

Crack Repair When there are floor cracks found, they need to be assessed and immediately fixed for safety concerns. 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 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. 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 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.