

## **Very Narrow Aisle Forklift**

Used Very Narrow Aisle Forklift Anaheim - Warehousing needs greatly focus on space-saving techniques and layout to maximize expensive square footage and decrease travel time needed to get goods from the loading docks and from point A to point B. 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. Numerous narrow aisle forklifts deliver better stacking heights to increase the storage capacity on a square foot basis. Very narrow aisle forklifts can greatly reduce costs compared to traditional forklifts since the same amount of stock takes up less space in the warehouse. Most urban locations have expensive square footage; therefore, reducing costs is a benefit to warehouses and their business. Warehouse storage can be increased up to eighty percent with careful planning when a narrow aisle width configuration is utilized. Very narrow aisle design facilitates greater product access and more rack faces. 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. 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. When selecting a forklift for a job application, it is essential to know the aisle dimensions. 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** As these units are mostly powered by electricity, rechargeable batteries are popular for very narrow aisle forklifts. These very narrow aisle trucks are more commonly available as stand-up riders, which helps increase productivity and operator comfort. The most popular kinds of very narrow aisle forklift trucks include turret or swing-mast, end-control riders, order pickers and reach trucks.

**Reach Forklift Trucks** The reach trucks were created as a type of rider stacker forklift but can be modified specifically for narrow aisle usage. This machine earned its name by its ability to reach its forks to secure 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. The moving mast works by raising and lowering the forks along the mast, while the operator stays at ground level. The moving mast reach truck is generally considered the safer of the two types of reach trucks. 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 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** 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** 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. For rail-guided systems, a series of rails are installed into the floor, on both sides of the aisle, and run along the floor for the length of the aisle, curving around the end of the aisle. The forklift is fitted with special wheel guides that slide into the rails, preventing the forklift from moving outside 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 main locations that need to be ideally prepared before any racking system can be installed. These areas need to be monitored continuously including fixing cracks in the floor, ensuring the racks are straight, a level floor and an appropriate load capacity of the floor.

**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** The floor needs to meet specific minimum requirements prior to 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. 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. Every rack needs to be plumb to ensure a safe system and work environment. If necessary, rack shims should be used to ensure the racks are plumb within 1 inch at the 30 foot height of the racks. Racking failure can happen if the aforementioned measures are not taken or implemented correctly. 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. These measurements are vital to the success of installing a safe and productive narrow aisle configuration.