

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Fairfield - 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. Extremely narrow aisles offer more storage space since there is less space needed for aisle access. These warehouse configurations are often referred to as warehouse optimization. Warehouse Optimization Several benefits can be enjoyed for adding very narrow aisle warehouse optimization such as more storage space for the facility. Because very narrow forklift trucks were developed to take up less space in maneuvering, it is now possible to decrease warehouse aisle width to less than half the width required by standard forklifts. Numerous narrow aisle forklifts deliver better stacking heights to increase the storage capacity on a square foot basis. 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. Most urban locations have expensive square footage; therefore, reducing costs is a benefit to warehouses and their business. 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. Very narrow aisle design facilitates greater product access and more rack faces. This usually equates to less travel time gathering and storing product as more product is located within a smaller, more accessible area. It is common for warehouses to use a very narrow or narrow aisle layout. 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. 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. 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. 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. 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. 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. The moving reach truck is typically considered the safest out of the two kinds 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. These machines are used for picking up lighter stock that can be moved by hand. These order pickers work by lifting the operator up to the level of goods in order to identify and pick the specific item or items necessary to fill 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 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. 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. 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** To use a narrow aisle configuration, there are some key considerations that need to be made. The floor and the rack construction needs to be evaluated to avoid any issues since the very narrow aisle units have extremely high racking systems. 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 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. Minimum flooring requirements include concrete measuring three thousand psi and rebar distributed evenly three to four inches below the surface. Depending on the configuration and load requirements, extra reinforcements may be necessary.

**Plumb Racks** The racking system is essential to the whole process and needs to be installed properly. 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. 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. These measurements are vital to the success of installing a safe and productive narrow aisle configuration.