

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Surprise - 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. 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 Implementing very narrow aisle warehouse optimization is a huge benefit of warehouse optimization. One of the most important benefits is the increased storage space. 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. 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. 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. Less than eleven feet of aisle width is needed by narrow aisles. Very narrow aisles usually use an aisle width of approximately 6.5 feet across. 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. 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** 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. 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** The reach trucks were created as a type of rider stacker forklift but can be modified specifically for narrow aisle usage. The reach trucks developed their name from their forward-reaching actions to get 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. 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** Turret or swing-mast very narrow aisle forklift have a pivoting articulating swivel mast. 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. 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. The forklift is fitted with special wheel guides that slide into the rails, preventing the forklift from moving outside the rail guards. Wire-guidance forklift systems install wires on the floor instead of rails and the wires run down the middle 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. 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 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. 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** The floor needs to meet specific minimum requirements prior to a narrow aisle configuration. 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** Installing the racks safely and correctly is vital for the entire system. There is a major chance of rack failure if improper installation occurs. 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. 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.