

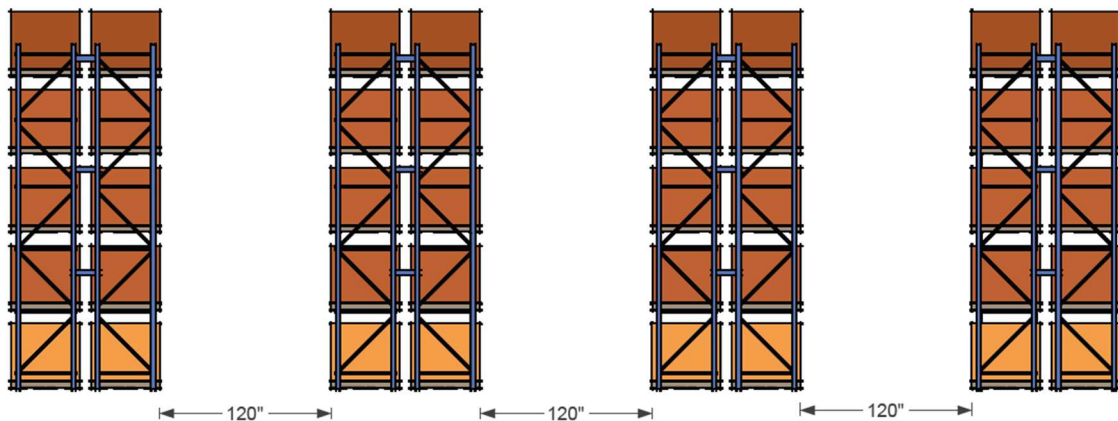
## ADVANTAGES OF VERY NARROW AISLES (VNA CONFIGURATION)

Very Narrow Aisle racks, once thought of mainly for large distribution centers, is now within the reach of SMB's to help them move forward and solve their space constraints.

Very narrow aisle, or VNA for short, was once only commonly seen in large distribution centers. This configuration, which features aisles of between 6' to 6.5' wide, requires special equipment to service it, but brings a number of hard-to-beat benefits. VNA is a simple arrangement, and falls into the category of being 100% selective, meaning that every pallet can easily be accessed at any time. This benefit is of prime importance to operations having a low number of pallets per SKU; in this situation, more complex configurations such as double deep, pushback or drive-in would not make sense. Many food distribution operations are of this type, as are a host of other distribution type businesses, including sanitary supplies, cosmetics and dry goods.

VNA brings density to a rack configuration that, by nature, is not very dense. Selective racks typically have wide aisles designed for stand up reach forklifts, or counterbalance (sit down) forklifts that must turn 90° to the racks in order to pick a pallet or refill an empty spot. Below is a side view of a typical selective configuration, showing the aisle width necessary for that 90° turn.

### STANDARD SELECTIVE RACK CONFIGURATION (REGULAR AISLE)



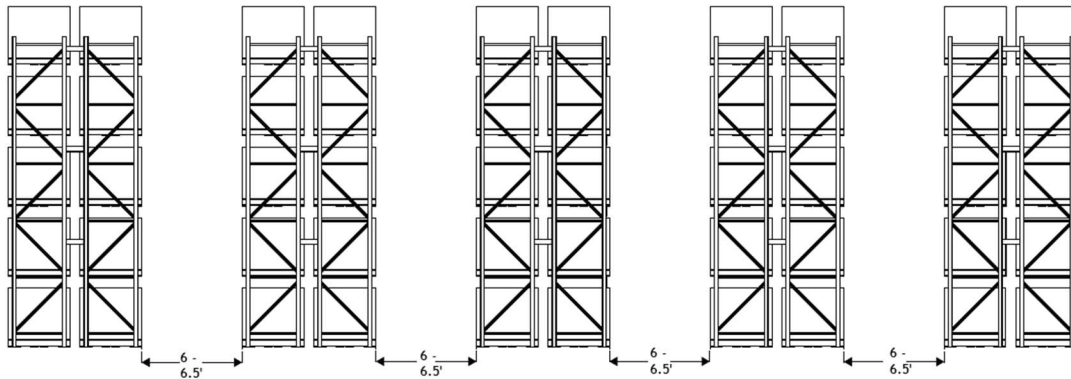
These standard selective racks are serviced by stand up "reach" trucks or three-wheel counterbalance trucks that can operate in 120" aisles. Here are two typical lift trucks for the above selective configuration:



Conversely, VNA racks have narrowed aisles that are not designed to allow a lift to turn 90° to access them. By their very nature, the forklift is constrained to remain parallel to the racks. It is this different way of maneuvering that saves so much space in the aisles.

Here is a typical side view of a group of VNA racks showing the narrow aisles of 6 - 6.5'. Notice how we are able to fit one more double row into the same space that four double rows took in our previous illustration.

### VERY NARROW AISLE (VNA) CONFIGURATION



This tightening of the aisles allowed us to fit 25% more rows of racking, and thus, 25% more pallet positions in the same space. This type of optimization can bring huge benefits, allowing the business to grow by 25% before it is forced to expand by either building on to their current building or taking on additional space.

VNA racks require a narrow aisle forklift, of which there are two main styles; articulated and swing reach. Below are illustrations of each type:

### ARTICULATED NARROW AISLE FORKLIFT

The AisleMaster or Bendi type forklift uses a unique articulated design that allows it to pivot at the point where the mast connects to the body. This means that it has a greatly shortened turning radius, and can thus service the racking without turning the entire body of the lift 90°. Only the mast turns, while the body remains more or less perpendicular to the racks.



The other type of lift that is commonly used for VNA is the swing reach turret truck. These offer the ultimate in convenient, sit down comfort for the operator, and are designed to greatly increase operational efficiency through ease of use and effectiveness. There are two main types: man-up and man down. Here is an example of a man-up swing reach turret truck:



The mast not only pivots 90° each way, for a full 180° range, but it slides along a geared track that functions as a reach mechanism. These are large machines, designed only for picking and put away. Other, smaller forklifts are required for the tasks such as truck loading and unloading and transport around the warehouse, such as to a quarantine floor area. Because the cabin moves with the forks, the operator actually rides up so that he is always at the level where the pallet is being picked or put away. These machines require wire guidance; something that is very common these days, where a special conductive wire is placed in the center of every aisle to guide the forklift; no more rack damage in these installations.

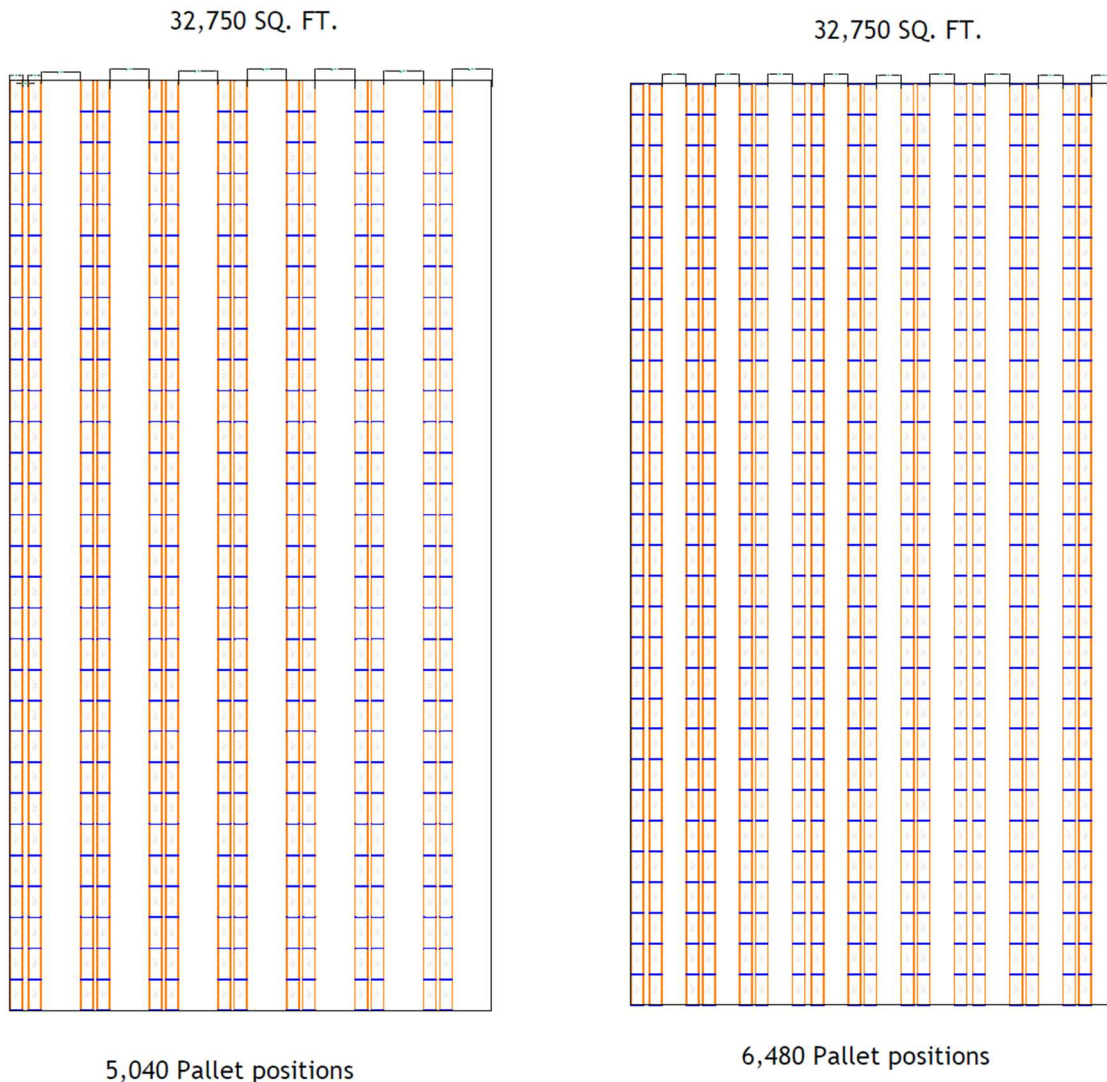


The man down swing reach turret truck is similar to the man up model but the operator remains at ground level at all times. More suitable for warehouses where the racks are 20 ft. or less, this model still features the 180° mast swing, along with the reach functionality.



Finally, there is another type of man down swing reach that may be ideal for small to medium businesses: the four-wheel counterbalance truck with a swing reach turret attachment. This unit combines the 180° mast swing function with all the practicality of a workhorse forklift that is seen everywhere from the loading dock to the production area. Able to lift loads of up to 2,500 lbs. to a height of 20 ft., this unit promises to be a good compromise for those operations that can benefit from a VNA configuration, but can't justify the more expensive, dedicated turret trucks.

### SAME SPACE, TWO SCENARIOS, WITH AN IMPRESSIVE DIFFERENCE



This optimization provided 1,440 more pallet positions in the same space; an increase of 28.5%. Typically the increase will vary between 25 and 35% depending on the current aisle width and the building configuration. Often this type of optimization can mean the difference between a company having to move or take on more space elsewhere, and being able to stay in their current quarters.

### PLANNING FOR VNA

A space optimization expert can analyse your current configuration and plan how a VNA scenario would work. Our planning department has a wealth of experience in helping clients to evaluate their needs present and future and decide if this setup will help them attain their goals. First you need to ensure that you have an up to date building drawing that shows your current rack configuration. At the same time, you should draw up a spreadsheet that shows your range of SKUs and how many pallets per SKU. Very narrow aisle provides complete 100% selective access to every pallet. If you have many pallets of the same SKU, another configuration may be more appropriate.



## REDUCE OR ELIMINATE RACK DAMAGE WITH VNA GUIDED EQUIPMENT

VNA material handling equipment is usually guided, either by rails or by wire guidance. This guidance usually means that damage to the racking is eliminated. This factor should be taken into account in the overall analysis for a business case.



## TOOLS TO INCREASE PRODUCTIVITY

A number of forklift options and accessories exist that can greatly facilitate the smooth running of your operation and increase productivity. Cameras that mount on the mast of the forklift can aid the operator to see exactly where he is placing the pallet. In the case of a man-up swing reach turret truck, the operator is in a cage that moves up with the forks and thus is ideally situated to view the pallet and the rack. For man-down models, an automatic fork height positioner is available that can be programmed with preset heights that exactly match your rack levels. This saves time and can protect your racks from damage.





### MERITON PLANNING SERVICES

Deciding whether VNA is the answer to your space requirement may require the help of expert planning consultants. Meriton draws on many years of experience in storage system planning to help our clients plan their next move, upgrade or reorganization. Our technical service reps are highly qualified for meeting clients in their facility and going over their needs. They bring back the data our planning department needs to do the analysis required in each situation.

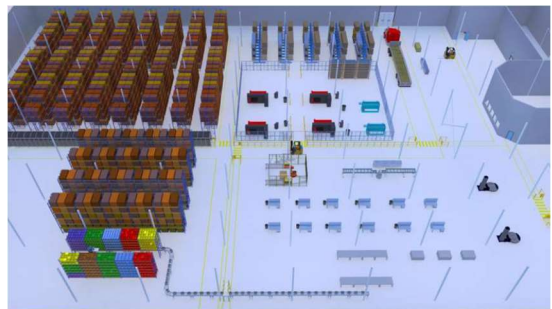
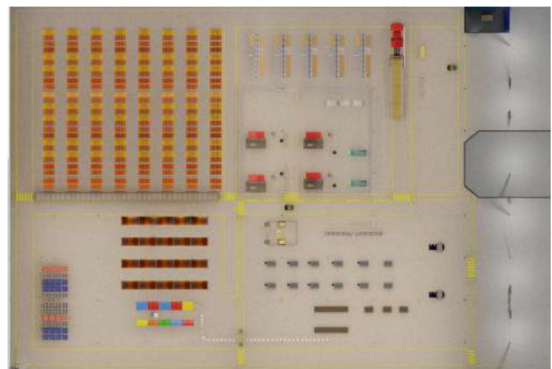
Meeting a Meriton technical rep is the first step in analyzing if the VNA storage system is appropriate for your needs.

### YOUR BUILDING, YOUR OPERATION, YOUR GOALS

Meriton will take your building plans, the data behind your storage and material handling needs, and your objectives for growth and operational efficiency. Our storage system experts will do an in-depth study to determine what the best solution, keeping in mind your medium to long term goals.

Our recommendation will give not only the information needed to build your business case, but will also provide a road map to reach the next milestones in your journey.

Look to Meriton as your partner in reaching your strategic growth objectives.



**WHERE OUR NUMBER ONE GOAL IS TO  
FIT THE MAXIMUM NUMBER OF PALLETS  
INTO YOUR WAREHOUSE.**