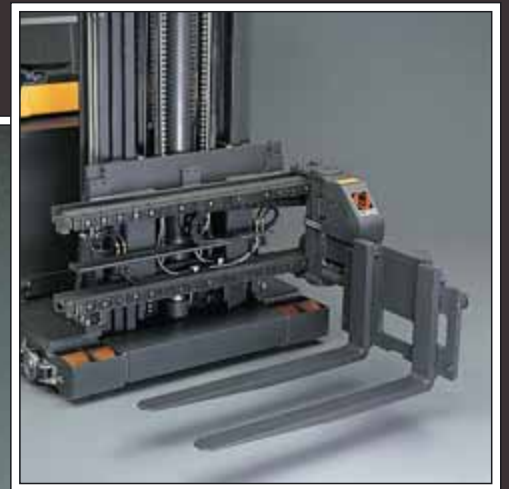


NARROW-AISLE STACKER

URF TERGO AC POWER PLUS

"MAN DOWN" STACKING IN NARROW AISLE
WAREHOUSES



ATLET

WHOLE-PALLET HANDLING IN TH

Optimising the storage area, is becoming increasingly attractive.

The reduced costs for storage area, lower cost of new building, possibility of expansion etc. give the compact, high-bay warehouse definite advantages.

A simple comparison between two types of warehouse shows that high storage with narrow aisles can reduce logistics costs by 20–25%.

Pallets per sq.m.

The conventional warehouse requires aisle widths of over 2.5 metres. In the narrow-aisle warehouse the aisle width is between 1.5 and 1.7 metres.

Aisle Width 1.5 metres

A narrow aisle warehouse is a truck operated store with aisle width of less than 2 metres usually 1.7 m. Stacking heights vary from 4.5 to 10 metres.

A narrow-aisle store can be built as a total warehousing solution or as a part of a storage system with aisles of various widths.

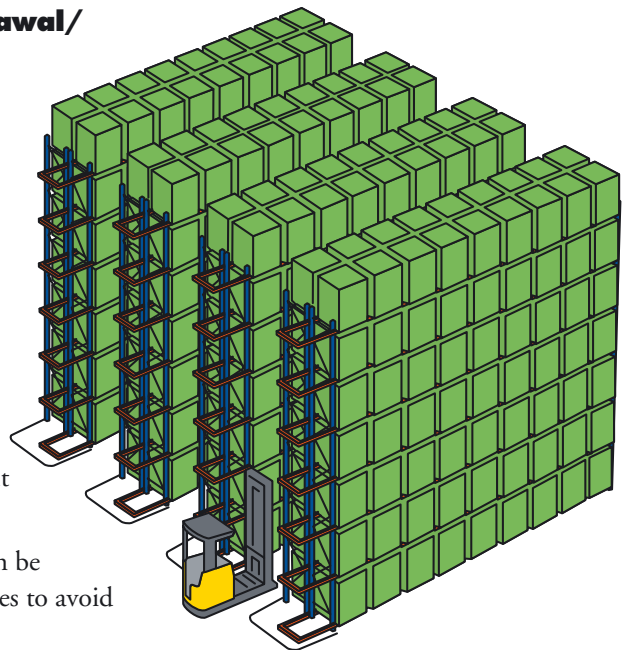
The narrow aisles can only be served by narrow-aisle trucks, but narrow-aisle trucks can also work in wide aisles.

Stacking/Withdrawal/Order Picking

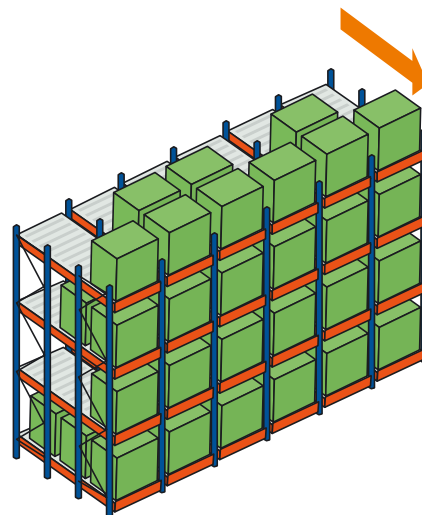
A narrow-aisle store may be a warehouse for whole-pallet handling alone, or, more usually, for both pallet-handling and order-picking.

Different aisle widths may of course be combined in a narrow-aisle warehouse, in other words the aisle width may be doubled to permit traffic in both directions.

Fast-moving items can then be stored in double-width aisles to avoid bottlenecks.

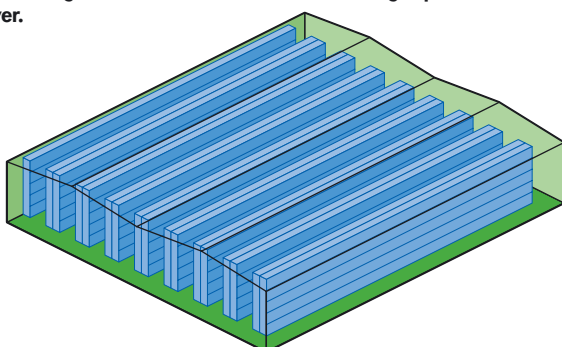


A narrow-aisle warehouse may be intended solely for whole-pallet handling or may also allow order-picking.

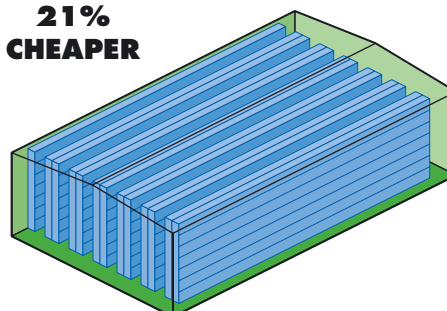


Another way of balancing inflow and outflow is the pallet flow rack. Stacker trucks put the item into stock from entry aisles and the items are then picked from a picking aisle, which allows narrow aisles throughout the system.

A conventional warehouse with a storage height of 5 metres is compared with a narrow-aisle warehouse with a storage height of 9.5 metres. With the same rate of turnover and pallet position requirement the effective storage area is 57% smaller in the narrow-aisle store. The storage volume is only 19% less. And the logistics cost (the total cost of handling a pallet) in the narrow-aisle store is a full 21% lower.



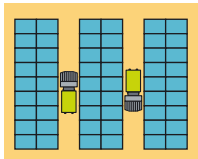
**21%
CHEAPER**



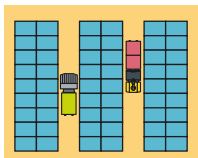
E NARROW-AISLE WAREHOUSE

Layout

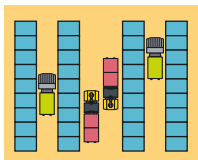
The layout of the narrow-aisle warehouse is adapted to the storage and handling need. The layout and efficiency of the warehouse can be simulated and evaluated in the Atlet Logistics Analyser, a valuable aid in the assessment of the design and capacity of the narrow-aisle store.



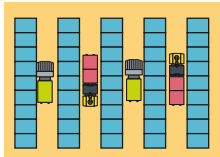
Narrow-aisle store for inflow and outflow of whole pallets.



Narrow-aisle store for entry of whole pallets and line-picking.



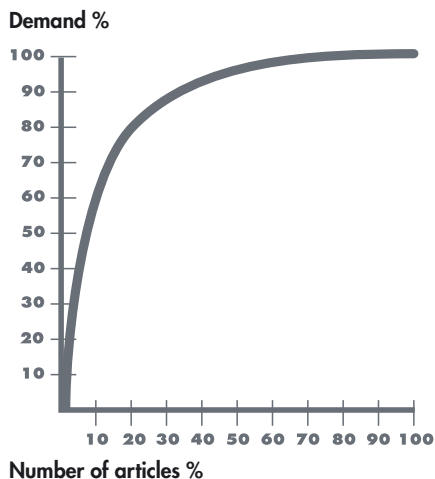
Narrow-aisle store combined with wide aisle for intensive picking.



Flow rack system with alternate picking and stacking aisles.

The 80/20 Rule

The 80/20 rule is often relevant in warehouse planning; it implies that 80% of the handling work is accounted for by 20% of the products or the range.



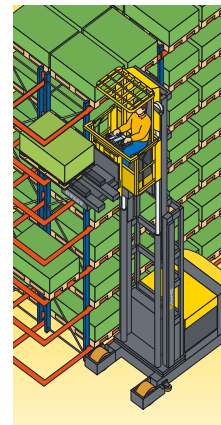
“Man Down” Whole-Pallet Handling

“Man Up” and “Man Down” are two methods of handling whole pallets in a narrow-aisle store.

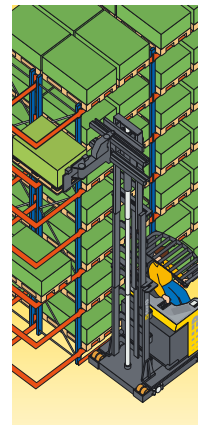
Man Up means that the truck has a rising cab; the driver goes up to the pallet position with the load. Man Down means that the driver stays at ground level.

A Man Down system has decided advantages. In particular it gives more rapid positioning and handling. Fear of heights impairs performance.

Electronics and visual aids facilitate pallet handling from ground level and also make it simple to stack at high levels.



Man Up



Man Down

Narrow-Aisle Storage - Open and Flexible

Flexibility is a keyword in sound materials handling. The market can change rapidly, which may easily upset the handling system. A crane store is also a kind of narrow-aisle store, but it is a closed system. A “closed” investment. A truck operated store always produces an open system with the possibility to make changes quickly and at minimum cost. In addition reliability is always guaranteed in a truck store.

The Narrow-Aisle Truck

The Atlet URF is a narrow-aisle stacker which can also be used outside the narrow-aisle section. The pallet is carried in front of the mast with forks which swivel 180° and shift sideways.

Rail-Guided

The truck is rail-guided in the aisles. The driver can concentrate on the work of stacking.

The load can therefore be raised as soon as the truck has driven into the aisle. A preselector for level and pallet position makes the truck almost automatic.



Camera and optical reading are other effective accessories.

Automatic stop if there are unexpected obstacles in the gangway.

Based on the Atlet Reach Truck

The URF is based on the prize-winning Atlet reach truck chassis.

This provides machines as manoeuvrable outside the aisle as a reach truck. It also allows this compact machine to operate in transfer aisles as narrow as 3700 mm.

Seat

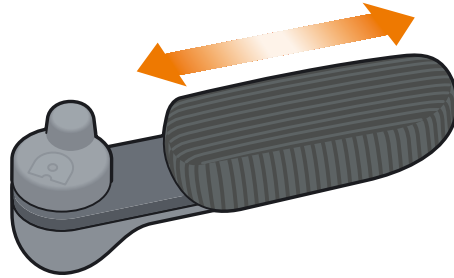
The seat is adjustable and offers individual comfort. Variable position, height, rake, angle, backrest, springing and headrest.

The steering and controls have been designed to give maximum protection against strain injuries. The mini steering wheel is standard on narrow-aisle trucks.



Mini Steering Wheel

The mini steering wheel is an electronic steering control which permits very small "wheel movements". In fact a small shift with a cupped hand.

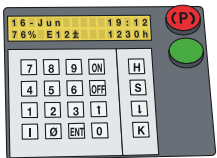


At the same time the forearm rests on a sprung armrest. All serving to give a relaxed steering movement. The technique is scientifically tested and documented as an important factor in preventing strain injuries.

Controls

Fingertip lever control for all commands. Simple button controls for many functions such as level selector, pallet position, automatic driving, fork operation, camera etc.

The armrest for the controls is wide and comfortable. Sprung and floating for the ultimate in ergonomic operation.



TRUCK COMPUTER ENSURES AVAILABILITY

The availability of the narrow-aisle truck is ensured by the high quality of all components including the mast and the chassis.

The truck computer monitors operation and sounds an alarm if faults arise. 34 check points. The computer also collects driving information which can be transferred and processed in a PC. The particular driving period can be linked to the

driver in the event of accidents or careless driving and neglected maintenance.

The computer also controls driving characteristics.

The time needed for servicing is kept to a minimum with the aid of the truck computer and the logical design of all the components needing servicing.



TOP-CLASS ERGONOMICS

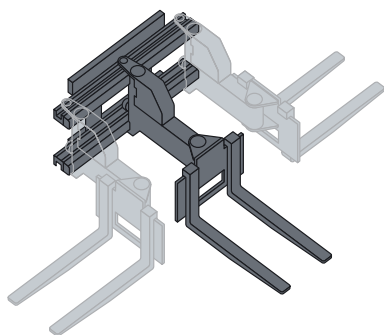


URF FOR NARROW AISLES AND FREE-RANGING

The Atlet URF is designed for narrow aisle operation but with the capability to work effectively outside the narrow aisle store. The truck is versatile and compact measuring only 1864 mm when loaded (Europallet).

The URF picks up pallets from the floor, enabling it to fetch goods from the central reception area and place them in their pallet position in the narrow-aisle store. A single handling cycle.

The URF is an excellent solution when the narrow-aisle store is one part of a larger warehouse. The truck can work in all aisles.



The swivelreach unit turns 180° and can be shifted sideways. The pallets may be open or closed.

The aisle width for the URF is 1600 mm. Transfer aisle minimum 3700 mm. Max. load 1500 kg.

Varying Aisle Width

When a narrow-aisle store is being planned, varying aisle widths may often occur, due to the position of the pillars and various load lengths.

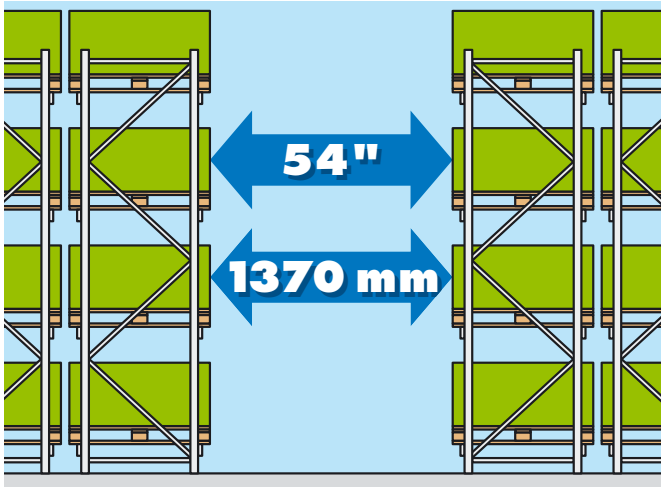
A URF can cope with these variations with a special reach attachment.



The URF permits many efficient handling cycles, thanks to the Swivel Reach unit. The flexible forks give it a remarkable versatility. The URF is an excellent solution when a narrow-aisle store forms part of a larger warehouse. The truck can work all over the warehouse, in all aisles. The URF is handy in combination with picking trucks.

EQUIPMENT

The narrow-aisle truck has a large range of equipment to automate and facilitate handling.



A special version of the URF for extremely narrow aisles.



Autostop for safety. Stops the truck automatically at the ends of the aisle.



Video equipment. One or more cameras, gives a clear view of the position of the pallet.



Powered battery change for multi shift operation.



Complete package for rail- or wireguided steering.



Automatic level selector. The driver enters the shelf level via the keyboard and the truck raises the load to the correct level. Light indicator to show the exact position of the truck in the aisle.



Standard Components Give Advantages

Atlet has developed a consistent component standard for all its trucks. Some 3000 components cover the whole range.

This has a number of advantages:

- Every component is of high quality.
- Tried-and-tested components mean higher truck availability (fewer stoppages).
- The number of frequently required spare parts is low (about 400), enabling each service vehicle to be fully equipped and to have an immediate level of service of no less than 95%.
- New models and customised versions are based on proven components.

Atlet offers a complete truck range for internal materials handling. Developed and manufactured at Atlet's works in Mölnlycke.

ATLET

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