

# HOW BENDING FORKLIFTS TRANSFORM WAREHOUSE ECONOMICS

**Each year, billions of pounds are still wasted in Britain through wrongly chosen materials handling equipment and logistics techniques.**

Over the years, warehouse management software has helped cut such losses through more efficient stock control, supplemented by techniques like Just in Time (JIT) and cross docking. Handling hardware improvements since the advent of forklifts in Britain during World War 2 have also helped through developments like reach trucks, man-up order pickers, AGVs (automated guided vehicles) and automated stacker cranes. A further boost came when these machines were married to paperless stock control based on real time, mobile data capture devices. But if there is still multi-billion pound wastage today where can it be found in the materials handling equipment domain and how can it be rectified?

Often, when new mould-breaking inventions are developed, their acceptance is slow: corporations, through inertia and wariness, prefer to let competitors cut their teeth on new inventions in case they fall flat on their face. This was true of warehouse wireless operations when they were introduced over 25 years ago. Warehouse racking caused serious signal interference, leading to widespread disappointments. Today, paperless warehouse control is now entirely reliable and commonplace, allowing users to cut



stocks and improve customer service to levels unimaginable 30 years ago.

This wariness was equally true of articulating forklift trucks, which first appeared in Britain during the 1950s. These early American designs, however, had serious limitations, forcing low lift heights (2.5 mt) and aisle widths not more less than those required by conventional counterbalanced (cb) forklifts. They could not articulate much more than 30 degrees, so while the concept for saving space was laughably simple, the far more complex engineering problems meant Britain had to wait over 30 years more before an acceptable, articulated forklift truck was produced. This was the Bendi forklift, launched by Redditch-based Translift Engineering in 1988, a company with a long pedigree of forklift innovation.

Acceptance of the Bendi was slow at first, partly owing to design limitations, but once these were ironed out, Bendi sales began to soar in a UK market which today is worth nearly 1,000 trucks a year. Deals struck with American and French partners ensured world-wide acceptance but 1,000 trucks a year is still small beer in a UK annual market worth around 30,000 forklifts of all kinds. This proves that so much money is still wasted

when companies renew their forklift contracts.

But why are articulated forklifts so important to warehouse economics? Three words sum up the answer: space, time productivity. This can be such a powerful combination that they allow Bendi buyers to achieve instant truck payback and much more besides in certain circumstances. Owing to the Bendi's 200 deg articulating fork mast, the truck can work in aisles only 1.6 mt wide and lift loads to 12.5 mt, compared with the 2.6 mt and 3.6 mt needed by reach and cb trucks respectively. Its large, soft, rubber-tyred wheels and articulating rear wheel axle also allows work outside on the roughest of yards, a feat beyond reach trucks and dedicated VNA (very narrow aisle) machines. In space-saving terms, this means that a Bendi will allow users to store up to 30% and 50% more pallets than reach and cb trucks respectively, without altering the storage cube. In terms of time, a Bendi is at least 20% faster than reach trucks, agree users, especially when the Bendi cuts out double handling commonly associated with a mixed fleet of forklifts.

Both space and time have a staggering impact on truck productivity. Most distribution companies, for example, operate a mixed fleet of forklifts, usually cb trucks for yard work unloading/loading lorries, and reach or VNA trucks for internal storage work. Provided lorries come and go all day long so that cb trucks never stop working, then they are achieving maximum productivity in terms of pallets moved per hour, but how often is that the case? It is far less common than operations where up to half the time forklifts are lying idle for want of work owing to their relative inflexibility. The Bendi's versatility for indoor and outdoor work means the truck can be expected to move far more pallets per hour than competing trucks.

The importance of storage space cannot be overestimated when expansion needs beckon. There are three solutions to storage expansion problems: build a new warehouse extension, rent off-site premises or narrow

existing wide aisles for articulated or VNA truck operation. The last of these is invariably by far the cheapest. One Bolton-based food company, for example, needed more storage space at its production site and was already renting two warehouses off-site, including a cold store 30 miles away. It had been using reach and cb trucks in 3.6-mt wide aisles but by switching to rented Bendi trucks it could reduce aisle widths to 2 mt. This saved enough space to close down its off-site cold store, costing £250,000 a year, which did not include all the saved costs of transport and handling between cold store and factory. Given that the company rented the three Bendis, it achieved instant truck payback. It could have chosen dedicated VNA trucks but these ponderously slow, inflexible machines are far more costly to buy and run, and are utterly unsuited to outdoor work. Moreover, if storage contracts change, VNA trucks are almost impossible to transfer to new sites, making their resale value very low. Apart from space, time and productivity issues, there are also significant safety advantages of the Bendi over other truck types. Load vision is one, as Bendi drivers have an unobstructed view of loads when

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interfacing with racking beams, something not possible with other forklifts. There is also no rear end swing common to other trucks, which causes so much damage to racking, trucks and loads. Avoiding costly floor upgrades can also be a

major Bendi advantage. Reach and VNA trucks have much smaller, harder wheels than the Bendi's soft rubber-tyred wheels, thus imposing much higher wheel point loads that would wreck all the best warehouse floors. All forklift buying exercises need careful analysis of existing and likely future needs. Business needs can change quickly but forklift versatility offers some cushion against those needs by allowing change in the least costly and disruptive way. No other generic forklift can match the versatility of articulated trucks, but as a concept, bending in the aisles is still largely neglected through nothing more than ignorance and inertia.