

Not every product can be lifted by forks alone but with the right **attachment** in place, there's really very little the lift truck isn't able to handle.

# Never too hard to handle...

By Robin Meczes

Versatile though it is, the standard lift truck does not really lend itself to handling products that do not sit nicely on forks. But despite this, a huge number of special handling attachments on the market means that there is really no such word as 'can't' in the dictionary of lift truck handling.

From the simple – like double pallet handling attachments – through to the sublime – like vacuum attachments for handling sheets of glass – there really is very little the forklift truck doesn't get to grips with.

Loads that forks will not easily get hold of may be a firm's core product or may need only occasional handling. But either way, they pose a tricky handling problem that in many cases can only be solved using a lift truck attachment. Many handling requirements can be solved with standard attachments but even where they cannot, most attachment manufacturers are usually prepared to create something bespoke, whether simply by adapting a standard attachment or designing something completely new.

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Some attachments merely compliment the basic fork arrangement - fork positioners to alter the space between a truck's forks, for instance, or sideshifters that allow trucks without an integral sideshift to move the forks sideways. Others are used to replace the standard truck forks, like double pallet handling attachments to let you pick two pallets up side by side. And others still do away with the idea of handling with forks altogether,



**Main image:**  
**Paper roll clamp**  
Paper rolls are among many products that don't really lend themselves to being handled by conventional forks. (Image copyright Getty Images).

**1. Brick and block clamp**  
The construction sector is a big user of attachments, especially clamps like this Kaup unit which allow for transport of unpalletised loads. (Image courtesy of B&B Attachments).

**2. Foam sheet clamp**  
Attachments can be used to handle even delicate products, like these foam sheets. (Image courtesy of Bolzoni-Auramo).

**3. Rotating clamp**  
The ability to rotate loads as well as grip them adds an extra dimension to many attachments. (Image courtesy of Bolzoni-Auramo).

such as clamps, jibs, booms or rams that let the truck pick up or suspend a huge variety of products including cartons, white goods, kegs, drums, tubes, pipes, reels or rolls – as well as highly irregular shapes like whole engines or special castings.

Perhaps not surprising, then, that so many industrial sectors take advantage of the added versatility offered by lift truck attachments. With a lot of unpalletised loads such as blocks and paving slabs, the construction sector is a particularly big user, for instance. Companies involved in handling drums and kegs are another big user of attachments – apart from the obvious difficulties in getting a load carrier underneath a drum, such loads tend to be well over the limit for manual handling.

Sometimes, of course, it's not the product itself that drives the need for an attachment, but the handling throughput required. The drinks industry is a good example and tends to favour attachments that allow two or more loads (usually pallets) to be handled simultaneously.

In other cases, attachments are installed to allow specific manipulation of a load, such as rotation. This can come in very handy if a lift truck is being used to empty loose product into a hopper at one end of a food processing line, for example, or to transfer products from one pallet box to another, where the original unit load has become unstable or is otherwise unsuitable for some reason.

### Infinite flexibility

The benefits of using attachments are almost as diverse as the number and nature of attachments available. While other methods of handling awkward loads are usually available – conveyors or cranes being key examples

– such alternatives are often fixed, rather than mobile, cannot usually be used for vehicle loading and unloading or putting items away in racking and cannot generally be as quickly adapted to different load types. A single lift truck equipped with one or more attachments, on the other hand, can be used around a site for many special handling applications as well as conventional fork work – all in the course of a single shift.

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Where attachments are used to carry a product without a carrier, like a clamp used to handle white goods, the saving in load height from the lack of a pallet can make for better space utilisation, especially in terms of lorry loading. Attachments can make for a more secure load, too – a tall fridge, for instance, might be far less stable on a conventional pallet being moved over a bumpy yard than when clamped securely from each side, and a heavy lead pipe stands a lot less chance of coming adrift when held centrally from within by a ram.

A truck which can handle two or more pallets at once, meanwhile, is clearly going to be faster at moving multiple loads from one point to another. And while it could be argued that it might be simpler to use two conventional fork-equipped lift trucks, rather than one with a double pallet handling attachment, that would mean two trucks to buy, run and service, two drivers to be employed instead of one, and twice as many trucks operating in any given area at the same time – obviously a health and safety issue in its own right. →





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lifted along with any load, it reduces the truck's effective load capacity and on top of that, attachments which cause a load to be held further out from the truck's mast than normal will affect the load centre, again reducing total lift capacity.

**"Visibility through the truck mast can also be significantly worsened by the use of some attachments."**

Truck deration calculations are not for the layman and should only be carried out by your lift truck supplier. Remember that such calculations apply only to the use of a specific truck with a specific attachment and a specific load, so it's important, if you have a truck that uses a particular attachment, that you don't suddenly try using that attachment on another truck (however similar you may believe the two to be) or start carrying a different load. Tempting as it may be, if you're using a ram to carry a 2m long lead pipe, using the same attachment for a 3m long pipe without checking could be disastrous.

**Think it through**

There are also some strategic issues to be aware of when employing attachments.

Chief among these, perhaps, is maintenance. Attachments most certainly are not 'fit-and-forget' items – they're often subject to intense wear and tear and most attachments will need regular servicing every 250-300 hours or so. The servicing itself isn't terribly complicated, but unless you keep the attachment permanently fixed to a truck with an hourmeter, keeping track of the hours the attachment has actually clocked up can be. You also need to bear in mind that the attachment will almost certainly need servicing at different intervals to the truck it resides on which could, without proper planning, leave you with either a truck or an attachment you can't use – albeit temporarily.

Operators of lift trucks that use attachments should also be properly trained in the use of each one, however simple, and for health and safety purposes you'll need to ensure that operators who aren't properly trained in the use of a particular attachment don't go near it.

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The number of attachments you require and the number of lift trucks they are fitted to is another important issue. If you only need an attachment for occasional handling there's little problem, of course, but if it's central to

your production process you might want to have a spare attachment and a spare truck to fit it to in case one of them goes down suddenly. This will, however, depend on the type of attachment you're using – you're not going to want to spend too much on a spare attachment that's never used, after all.

Whether you leave an attachment permanently mounted on a particular lift truck or install and remove it only as necessary is another important strategic decision. Simple attachments – fork extensions, for instance – can be quick to apply and remove; those that are more complex – like hydraulic telescopic forks or double pallet handlers – may take much longer and are often left on permanently. Leaving attachments in place, of course, obviously denies you the use of the truck for conventional fork work which is fine if the attachment is in constant use but a bit of a waste of truck capacity otherwise. Fortunately, some attachments now come with automatic quick-connect systems for hydraulics which dramatically reduce the amount of time taken to connect or disconnect attachments and also avoid the operator leaving the safety of his cab to manually engage or disengage the hydraulics.

Bear in mind also that not all attachments will necessarily make handling quicker. Double pallet handlers that hold pallets side by side, for example, do not always let you

move twice as much in any given time as a single conventional fork truck, since apart from the extra time required to actually fit the attachment, your truck operator is likely to take much more time to position all the forks correctly before picking up the combined load and the additional load width may subsequently make it both harder and more time-consuming for him to manoeuvre.

It may be much quicker in such instances to use a different solution altogether, like Cat Lift Trucks' NPV20ND platform double pallet handler, for example - essentially a powered pallet truck with a compact duplex mast and two sets of forks to transport two pallets simultaneously, one above the other.

None of these various strategic considerations is prohibitive, however, and when all is said and done, there really is very little the lift truck cannot handle with the aid of an attachment - and little reason, therefore, to look for another handling solution where a lift truck attachment is available for the job. ■

**4. Appliance clamp**  
Operators' line of sight can be seriously impeded by some attachments or by the loads they allow the truck to carry. (Image courtesy of Bolzoni-Auramo).

**5. Cat® NPV20ND Multi pallet handler.**  
"A truck which can handle two or more pallets at once is clearly going to be faster at moving goods from one point to another."



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**Attachment examples**

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- B
- C
- D
- E
- F
- G

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**A word of warning**

There are, of course, some downsides to attachments. There is the cost, for one thing – some attachments (the more complex or bespoke ones, usually) can be very expensive (costing more than the truck they're fitted to, in some cases), though in situations where no other handling option is available or where the use of an attachment avoids the need for another, completely separate handling solution, this is often largely academic.

Visibility through the truck mast can also be significantly worsened by the use of some attachments, though clearly, this depends on the item in use. It also depends to some degree on whether the attachment is a permanent fixture fitted directly to the truck mast, or one designed to be fixed and removed as required, in which case it is more likely to be fitted onto the existing fork carriage – adding a further obstruction to the carriage's existing hindrance to forward vision.

Perhaps the most serious downside to attachments, however, is deration - the effect of the attachment on the truck's lift capacity. Since the attachment's weight itself has to be

A. Reach Forks.  
B. Multi Pallet Handler.  
C. Push/Pulls.  
D. Appliances Clamp.  
E. 360° Rotation Forks.  
F. Bale Clamp.  
G. Paper Roll Clamp.

**Selected attachment suppliers**

Cat Lift Trucks has three preferred manufacturers of forklift attachments - Cascade, Bolzoni-Auramo and Kaup.

US-based **Cascade** supplies a huge range of attachments including sideshifters, fork positioners, integral carriages, clamps, push-pull attachments, rotators and multiple load handlers. The firm also supplies both remanufactured and customised attachments.

Italian firm **Bolzoni Auramo**, a well-established producer of attachments, has a range that incorporates paper roll clamps, pulp and waste paper bale clamps, sideshifters, fork positioners, multi-pallet handlers, carton clamps, push-pull devices, rotators, reach forks and tyre clamps. Among its latest products is the AR series of paper roll clamps which can lift rolls of paper up to 1,860mm in diameter and up to 4,600kg in weight and can also rotate them through 180 degrees.

German manufacturer **Kaup**, meanwhile, supplies reach forks, rotators, multi-pallet handlers, fork positioners, sideshifters, clamps, pantograph-pushers, rams, loading buckets, snowploughs and crane jibs, among other attachments. The firm has recently introduced the T 429-1-2-3 triple pallet handler, which can lift up to 4,500kg at 600mm load centre, and also the new S-class push-pull attachment for handling loads on slip-sheets rather than pallets.