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New 6x2 Man 26-400. Fassi F275 remote crane with flat or cheese wedge body.



2010 8x2 Daf Cf 460. Fassi F660 remote crane with flat or cheese wedge body



2009 & 2010 8x2 Scania R420. Fassi F660 remote crane with flat or cheese wedge body



2011 8x2 Man 26-440. Fassi F660 remote crane with flat or cheese wedge body



New Scania 8x2 G400.
Choice of cranes and bodies



2010 Scania 8x2 R420. Fassi 455 remote crane with choice of flat or cheese wedge



2010 8x2 Scania G400. Fassi F275 remote with cheesewedge body.

17 ton payload.



New Scania 8x2 G400. Fassi 455 remote crane with cheese wedge body



New and used 6x2 Beavertails in stock



New Daf 6x2 Cf 410. F275 remote crane. new chhesewedge.
Man's also available



New Man 6x2. Fassi F455 remote crane with flat or cheese wedge



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Which Way now its small trucks mounts?

The growth in the small vehicle mounted aerial lift sector (3.5 tonnes GVW and below) has been nothing short of spectacular over the past 10 years. Spurred on by driving licence rules it has become the most diverse in terms of products and designs.

Glancing through last month's Cranes & Access dealer guide shows that there are now almost 40 mainstream producers, and that does not include the numerous manufacturers that only build for local markets around the world. The vast majority of these manufacturers are European with the introduction of the standard driving licence rules in 1997 restricting those with a car license to vehicles with a total all-up weight of 3.5 tonnes spurring innovation. The number of different models now on offer is well into the hundreds, with working heights ranging from nine to 27 metres. However the majority of the 3.5 tonne truck mounted models fall within the 20 to 22 metre range.

The reason for such a massive selection comes from the wide range of applications they are used for and the wide range of preferences. This can make choosing a small truck mount a real challenge. Van mounts are a little easier as there are fewer active participants in this market, but given that the majority are delivered to utility and telecom companies most of them are individually tailored to the buyer. This also applies to specialist 4x4/Land Rover mounted lifts as well.

Which one to choose?

When it comes to regular truck mounts the selection can be refined relatively quickly by a few major

- 1. Articulated or Telescopic
- 2. One man or two man platform capacity or higher
- 3. With or without articulated jib fixed or telescopic
- 4. Outrigger/stabilisers None at all? Straight down with-in machine's overall width? One sided or multiple configurations?

The work being carried out will of course negate some of these decisions - for example if you must have a working height of 20 metres or more you can forget the no outrigger option. If you need more than seven or eight metres outreach forget any hankering you may have for straight down only stabilisers and so on.

For many people their choice of platform mounted on small trucks is driven by the question of driving licences. For others it may be cost, with a 3.5 tonne chassis cab costing less than half that of a 7.5 tonner. Small, compact and easy to operate are all considered important in the 3.5 tonne sector.

Trends

With so many new models and variations popping up each year it is hard to spot any particular trends as one emerges the market switches to something else. There are however some general longer term factors coming into play such as lower overall heights and increased platform capacities

(250kg rather than 220kg for example). Many models have the booms tucked in behind the cab providing a low centre of gravity for good driving characteristics and increasingly important - less drag on the road for better fuel economy.

Another trend is completely variable outrigger settings, perhaps with one pair set down vertically while the second set can be extended to any length on one side only or both, with the machine automatically limiting the working envelope and or capacity to suit the footprint selected.

There is also an increasing number of platforms mounted on smaller vehicles - with Gross Vehicle Weights of under three tonnes aimed at inner city work and this also ties in with the growth of fully electric and hybrid power sources.

Platforms on small trucks?

This sector is usually referred to as 'small truck mounted platforms' but what we really mean is a platform mounted on a 3.5 tonne GVW or less truck. Some 30 to 40 years ago when the Simon D series truck mounted platforms were all the rage, the platform needed a 10

tonne chassis for what was effectively a 16 metre platform. Today we have 27 metres on a chassis a third of the weight. Perhaps more impres-

truck mounts



sive are the platforms mounted on tiny vehicles such as the 13.5 metre Co.Me.t dual riser articulated Eurosky boom, mounted on a 2.1

Many models such as this Cela DT21 have the booms tucked in and good driving characteristics.



truck mounts

C&a

tonne Piaggio Porter Maxxis. Measuring just 2.15 metres wide with outriggers

deployed it has the option of using an auxiliary engine to operate the platform. This tiny truck mount has around six metres of outreach and 200kg platform capacity making it ideal for inner city work and restricted sites.

Socage - which pioneered this sector - and others also offer platforms on the Piaggio and other small chassis some of which are yield steels and cold extruded aluminium profiles, but it has also been significantly helped by advanced CAD/CAM and finite element analysis - design systems which takes out the old-school 'guess work' by identifying the hot spots in a design which can then be strengthened or modified as required.

Geometry

While driving licences and costs are important parameters in terms of



electric driven. This size of truck mount is certain to gain in popularity for lower level work in the coming years as are electric truck and van mounts. Their major advantage is that they can work without noise or other pollution, carrying out maintenance and repair work outside normal working hours or in sensitive emission/noise areas without a problem.

Bigger and bigger

Advances in working height have been achieved in a number of different ways. In part it is the improved materials such as high the development of the small truck mounted market there are many that would argue that lift geometry will play an increasingly important role. They can be divided into two distinct areas - straight telescopic booms with or without jibs and articulated booms also with or without jibs. The van mounted platform is traditionally a fixed lower boom and fly jib, or a telescopic boom with or without a fixed fly jib. The advantage of the articulated

The advantage of the articulated sigma type boom arrangement is the ability to reach up and over an object without tailswing, and this has become the most popular in the





UK but not so in France, Germany or Italy. The UK preference is possibly influenced by the popularity of van mounted platforms, but more likely as a result of the larger rental companies in this segment and the sheer numbers of articulated units already in their fleets. Rental companies would argue that the articulated platform is the best all-rounder, able to carry out most jobs done by a straight telescopic boom telescopic boom with a fly jib as well as offering up and over capability. For the rental company, limiting a customer's choice to an articulated platform keeps it simple in terms of a pricing structure and the number of models in the fleet.

The articulated platform is certainly a 'jack of all trades' that will do most jobs in the volume market. The straight telescopic boom however has more outreach size for size, particularly where you have variable outreach according to the weight in the basket. Many articulated booms have a fixed envelope irrespective of the load. Some more recent models have added all in-line jacking envelopes which add to their versatility, making them capable of working in more confined spaces.

According to Melvyn Else of Access Industries - the UK Multitel distributor - while articulated models will remain popular, the real future development of the 3.5 tonne market will be the telescopic boom with telescopic fly jib configuration, which is not entirely the best of both worlds, but almost.

"The sigma boom and Multitel MX twin telescopic boom configurations suffer from the fact that they have limitations at low level. The straight telescopic has very good outreach but it has limited up and over capabilities. The telescopic boom with fly jib offers both good low level outreach and better up and over capabilities than a straight telescopic, but still nowhere near as good up and over as an articulated unit."

Perhaps the best geometry with the broadest all round capabilities is the telescopic boom with telescopic fly jib. As well as adding below ground capabilities it has good outreach at low level along with a good up and over capability. Is this the future of the 3.5 tonne GVW platform category - after all, the larger truck mounted platforms have this double telescopic boom system so why not on smaller platforms?

Market differences

There are of course significant differences between countries around the world. Within Europe the UK has a liking for van mounted platforms however in many other European countries van mounts are rarely, if ever, seen - perhaps some in France and Scandinavia while finding such products in Southern European countries such as Italy is nigh on impossible.

So what replaces the van mounts in these countries? Generally it is small, straight telescopic boom platforms often with 16 or 17 metres working height. A 3.5 tonne van mounted platform generally has working height of about 12 or 13 metres - any larger and the payload in the van completely disappears. You could of course use a van with a GVW of more than 3.5 tonnes but then you lose the car driving licence aspect for all but those who passed their driving test prior to 1997. However an increasing number of buyers are opting for the larger chassis for increased carrying capacity in the van, more stability for working heights - up to 30 metres on the truck mount - and also more options when looking for a 4x4 alternative to the trusty Land Rover which is rapidly coming to the end of its useful life as a platform base, particularly now with the recent introduction of the 'Whole Vehicle Type Approval' regulation.



Aldercote recently built this one man, nine metre, demountable working height platform for a local community council. When the four locking pins are released the stabilisers are lowered to lift the platform off the truck bed. Payload with the platform fitted is about 1,000kg

Recent introductions

There has been a plethora of new small truck mounted models launched this year at shows such as Bauma and Vertikal Days, many falling in the 20 to 25 metre, articulated and straight telescopic boom, 3.5 tonne category. These models make up the vast majority of platforms available for hire in Europe and will satisfy the needs of most users. However for those looking for something a little different here are a few 'alternative' vehicle mounted platforms.

Versalift Amarok platform

Time Versalift Denmark has an unusual range of three demountable platforms based on the new VW Amarok 4x4 pickup chassis. The VW Amarok 4x4 Quick Shift includes the nine metre working height LT 90 TB, the 11 metre LT 110 TB and the 14 metre LDT 140 TB and features a removable platform which can be replaced by items such as a salt spreader, water tank, loader crane, tipper or generator, giving the vehicle multi-functional capability, which is



ideal for platform owners or smaller rental companies. The standard platform has a capacity of 200kg which gives an outreach without outriggers of five metres. A smaller one man basket (120kg) offers around 6.5 metres outreach. The truck can work on side

slopes up to three degrees with no loss of performance, and up to a maximum of five degrees with reduced outreach and up to 10 degrees longitudinally.

Mantis Access

Newly formed Mantis Access is primarily

interested in specialist access equipment and has been appointed Oil&Steel's distributor for the UK and Ireland. It has recently created a 4x4 platform using the 21 metre Oil&Steel 21.12 Snake Smart boom mounted on a six tonne Terex









site dumper. The result is a manoeuvrable go anywhere platform with a maximum outreach of 12 metres and 360 degree continuous slew.

Affordable Access

Co.Me.t UK dealer Affordable Access has several interesting small truck mounted platforms. As well as the 13.5 metre working height, six metres of outreach Eurosky 14 mounted on the diminutive Piaggio Porter Maxxis chassis there is the X4 mounted on a 4x4 pickup. The 12 metre working height dual riser

articulated boom is mounted 'lorry loader style' across the chassis behind the cab. The design means that there is a clear pick-up body to carry tools or other materials. With



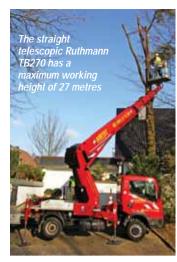


truck mounts

two outriggers- one either side of the boom, outreach to the rear is about 4.5 metres with 150kg capacity.

Articulated v telescopic?

If you really need the maximum height possible on a 3.5 tonne chassis the 27 metre straight boom Ruthmann TB270 and recently launched 28 metre articulated Socage Forste 28D are the two highest machines in their categories. You can see how they compare in the chart opposite, which is intended to highlight the differences between the two geometries. We have also added in the 25 metre telescopic boom/ telescopic jib Multitel MX250 which although having a slightly lower working height it shows how this geometry compares. As mentioned earlier each design has its own advantages. The straight telescopic generally has the greater working height (although now beaten by the Forste 28D) and better outreach, but is taller and has no true up and over reach. The Multitel 250 has the best combined up and over reach and outreach and at 2.5 metres, the lowest height.





	Ruthmann TB270	Socage Forste 28D	Multitel MX250
Geometry	Straight telescopic	articulated	Telescopic boom and telescopic jib
Maximum working height	27 metres	28 metres	25.3 metres
Max capacity	230kg	300kg	200kg
Max outreach	14.8m (100kg)	14.5m (180kg)	12.2m (80kg)
Max outreach with max capacity	11m with 230kg	10.5m with 300kg	9.2m with 200kg
Up and over reach	N/A	9.5m up 14.5m out	12m up 12m out
Overall height	3.0m	2.49m	2.5m
Overall length with basket	6.75m	6.69m	6.82m
Basket size	1.4 x 0.7m	-	1.4 x 0.7m

