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# The right tool for the job



**The range of different lifting equipment available or suited for industrial applications is continuously growing and evolving. Whether it involves lifting huge production machinery or just a small engine or pump, an ideal piece of equipment is sure to be available. It is not about the size of the equipment but finding the right tool for the job.**

**Clever design and improvements in technology have advanced to the point where battery electric industrial pick & carry, carry deck and spider cranes can perform as well as diesel powered models in terms of speeds, power and the ability to complete a full shift. Stricter manual handling regulations have also lead to the development of a burgeoning variety of smaller hand operated lifting machines, which are growing in popularity and spurring on further development.**

We have often highlighted the PowerAttack - an innovative lifting/skid tug which looks more like a powered broom handle but can move loads up to 25 tonnes using unpowered skates/dollies and is particularly useful in confined spaces in place of a fork lift truck

or crane. The product uses the 'leverage' and 'grip or traction' principal to allow the electric powered non-marking wheels to move such substantial loads. It features a two stage telescoping handle and weighs 75kg with battery. And if you need to move larger loads, combining additional units increases the capacity - ie two can move 50 tonnes, three 75 tonnes etc.

Available in two versions - the cordless battery powered MTC 25 CC and mains powered MTC 25C - they use a 24 volt synchronous motor with one kilowatt power output providing smooth, continuous forward and reverse functions and emergency stop. The device uses an adaptor to connect to most steerable skates - such as German made GKS-Perfekt or Jung - and

works like the kingpin of a tractor steering and manoeuvring (forward-reverse) a semi-trailer.

### Powered micro crane/lift

Another new hand lift is the Powered Hand Truck from Australian company Makinex which has a maximum capacity of 140kg when working with the hook and 120kg with the fork attachment. It is designed to work on hard surfaces on slopes of up to three degrees. Other attachments include a vacuum lifter, panel lifter and sling. The unit can be folded flat when not in use and carried easily in a van or truck.

The unit - which when lifting looks like a chicken wishbone - has a bottom frame with two travel wheels at one end with the handle with lift button and brake that the operator holds at the other. A long telescopic cylinder is connected centrally near the wheels to the moveable lifting arm which has a maximum lift of 1.9 metres. Power is supplied by an 18 volt battery pack.



*The 600kg capacity Innolift can self-load and unload items from the back of a van or truck*

### Portable material loader

Another interesting hand operated lifting product aimed at the smaller delivery sector is the Portable Self Loading fork lift from American company Innolift. The very clever product can self-load and unload items up to 600kg from the back of a van or truck and then operate in the same way as a walk behind material/fork lift. Maximum lift height is one metre. Once it has helped load the van it can load itself into the back, ready to unload the cargo at the next stop.



*Each PowerAttack can move loads up to 25 tonnes*



*The Powered Hand Truck from Australian company Makinex has a maximum capacity of 140kg*



CTE's Pianoplan has a 600kg capacity and can travel up a flight of stairs



A 1,200kg capacity Hoeftlon tracked carrier

**Up and down the stairs**

Moving loads up and down stairs is another application that has spurred manufacturers to develop numerous innovative stair climbing cart solutions including rubber tracked carriers. CTE has developed and refined its product offerings in this sector with its Pianoplan 600J range of machines. The various models range from a standard transporter, to the Horizontal model that will maintain a level cargo deck while travelling up a flight of stairs and the Vertical model which will lift and tilt a large bulky load from the end then tilt it to the horizontal for the journey/steps and then raise it back to the upright position when in its final location. Maximum capacity

is 600kg on all three and overall weight of the machines runs from 300kg for the standard model to 345kg for the vertical.

**Off road tracked carriers**

When transporting larger loads across uneven ground the tracked carrier - such as those seen on the JT Cranes stand at this year's Vertical Days and the 1,200kg capacity Hoeftlon TC1 - are ideal. JT Cranes offers two remote control carriers with capacities of 4,000kg and 1,500kg and platform heights of 570mm and 420mm respectively, ideal for moving loads when pick and carry is not an option.

JT Cranes is the UK distributor for Jekko, a company which

over the past few years has continued a total transformation of its product range, manufacturing facilities and distribution with many of its products ideal for industrial lifting. (see Jekko on the Move story p50)

**Mast boom crane**

As we have already seen, lifting and moving a load in an industrial situation is more about finding the right tool for the job - irrespective of size. This year's Vertical Days

also witnessed the UK debut of another unusual product - a mast boom industrial crane - from German manufacturer Hematec Arbeitsbühnen. Hematec calls its K 12500 a self-propelled assembly crane with telescopic jib.



The K 12500 a self-propelled assembly crane with telescopic jib from Hematec Arbeitsbühnen at Vertical Days

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The ZEE Crane 4500 during assembly

Whatever its name it has a maximum tip height of 10.5 metres with a 500kg lift capacity, and a maximum radius of almost five metres with a 300kg load at a height of almost seven metres, or take 500kg to a radius of 3.6 metres. The machine can also slew or travel with its maximum capacity even when over the side. Overall width is just 980mm but the weight however is a fairly hefty 4.8 tonnes. Based on the company's well proven Helix mast boom platform with a three section telescopic luffing jib in place of the basket, the unit is battery operated with direct electric drive and remote controls. The company has so far delivered 12 units to companies such as Audi, Bosch, Borbet, Mercedes-Benz and Volkswagen all of which appreciated its ability to work in restricted space conditions.

#### Battery operated carry deck cranes

We reported last year on a new all battery electric carry deck crane built by South Korean manufacturer Horyong and sold in the Americas as the ZEE Crane. Two models are available - the 4.1 tonne 4500 and the 8.2 tonne 9000 with a 13.6 tonne version in the prototype phase. Powered by dual battery packs the units can be fully charged overnight for an eight hour shift the following day.

The 4500 weighs 3.6 tonnes and has a travel speed of

4.5 mph with two mph pick & carry speed. At 8.5 metres the 4500 can lift 458kg. A 2.3 metre jib with zero, 25 and 50 degree offsets is available - ideal for restricted space working - with an easy to change single to two fall hook block. Options include non-marking tyres, an in-house designed LMI with built-in diagnostics and a one man work platform.

Another battery electric powered carry deck crane spotted at Conexpo in March is the BC-18, from Wisconsin-based Bailey Cranes with a maximum capacity of 8.2 tonnes a three section boom with 14 metre tip height. Pick & carry capacity is 5.3 tonnes. The American-made crane uses direct AC drive motors for all functions and load sensing hydraulics. Options include a hybrid version and a three metre jib. Overall weight is just over nine tonnes.

#### JMG expands

Italian crane manufacturer JMG Cranes is a relatively recent addition to the pick & carry crane market founded in 2007 by Maurizio Manzini, and joining other Italian companies such as Ormig, Valla and Galizia. Since then the company has unveiled a number of innovations, including the first electric pick & carry crane with a Programmable Logic Controller in 2013, and the first narrow width - 2,290mm wide - 45 tonne pick and carry crane in 2014. Last year the company acquired Lige - another small local industrial crane manufacturer with 70 years experience - and this year added the new MC 580 battery operated electric pick & carry crane to its 17 model line-up, with a 58 tonne maximum capacity.

*Continued on page 49*



Lige - acquired by JMG but has been making pick and carry cranes since 1945 - redesigned its range last year and produces cranes with capacities from two to 110 tonnes



The new Bailey Cranes BC-18 battery powered carry deck crane



**MPK50**  
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A Jekko MPK pick and carry crane

The MC 580 features a chunky four section, full power telescopic boom with boom nose mounted hook. The counterweight comprises four sections and an extendible wheelbase for additional capacity and greater stability. It has a fully equipped cab with radio remote joystick controls, a seven inch information screen, front wheel AC direct drive, rear 180 degree steer with counter rotating front wheels, allowing it to rotate on the spot through 360 degrees with full load on the hook. Options include a 30 tonne fork attachment, quick fit front levelling outriggers and a winch.

**Reedyk PC4405 and Jekko MPK50**

Another new industrial pick & carry crane is the compact Reedyk PC4405 from the Netherlands seen for the first time at Vertikal Days. The unit has been designed with an ATEX option for operating in areas exposed to explosion hazards. Equipped with a lithium ion battery pack, the crane is said to operate emission free for longer than one day on a single charge. The 30 degrees swivel boom assists accurate positioning and the PC4405 comes with a useful pick & carry deck. Maximum capacity is three tonnes, maximum lift height is nine metres with a maximum radius of 5.7 metres. The crane has a one metre overall width and weighs a relatively modest 2.8 tonnes. The

PC4405 has an overall length of just 2.4 metres with an overall height of 1.8 metres.

The PC4405 is a new breed of pick & carry cranes similar to Jekko's remote controlled, battery powered five tonne MPK50 Mini Picker, which offers a 9.5 metre lift height and a maximum radius of 6.2 metres. The MPK50 has an overall width of 1.2 metres and is three metres long. Overall weight is 3,450kg with the option of a 1,000kg counterweight. The Jekko also has a two section manually telescoped jib and offers five degrees of slew either side of centre. A front stabiliser bar can be used to increase stability and lift capacity. The Jekko Mini Pickers are pick & carry self-propelled battery powered electric cranes with radio remote controls. They can also be used with Jekko hydraulic manipulators or vacuum lifters for handling and placing glass panels with options such as winches, jibs, man platforms and lifting beams.

**The Hoeflon factor**

Another mini crane company based in the Netherlands and making a concerted effort to expand its product line and sales is Hoeflon. Its range now includes four mini cranes including the 600kg capacity mini crawler C1, and three spider cranes - the two tonne C4, the three tonne C6 and the four tonne capacity C10. With the range and sales increasing

**C&a industrial lifting**



A Hoeflon crane in a tight spot

The latest Versa-Lift 17/25 with moveable rear counterweight



the company is expanding and moving to a new facility.

**HD forklift options**

Anyone needing an ultra heavy-duty 'lift & shift' forklift cranes will have looked at the Versa-Lift range of machines. The four model range was extended earlier this year with a new smaller model now available. The 17/25 uses a slightly different design which combines the wheelbase of a 6.8 tonne solid tyre forklift with a moveable counterweight that extends to the rear by 914mm, rather than the whole frame extending as is the case with the rest of its range. Maximum capacity is 11.3 tonnes and the three section mast gives a 3.7 metre lift height on the forks, which increases to just under seven metres when using the optional

boom attachment. Overall weight of the 17/25 is 13.6 tonnes.

**Skid steer crane attachment**

Other weird and wonderful lifting devices include the SkidCrane. Perhaps not primarily aimed at the industrial lifting market, it is an attachment that converts a skid steer loader into a unit capable of lifting up to 2.3 tonnes and up to 13.1 metres. The SkidCrane is a compact hydraulically controlled crane attachment that is easy to attach, use and transport and ideal for working in confined spaces particularly on flat hard surfaces. Remote controls are also available.



Earlier this year JMG added the new MC 580 battery operated electric pick & carry crane



Another new industrial pick & carry crane is the compact Reedyk PC4405



The SkidCrane is a compact hydraulically controlled crane attachment for the skid steer loader

# Jekko on the move

Over the past few years Italian mini and spider crane manufacturer Jekko has been developing at a rapid pace. Cranes & Access caught up with chief executive Diego Tomasella at the opening of a new production hall to learn about the company's latest developments.

Five years ago, Jekko produced just 80 spider cranes a year however with annual growth of around 40 percent it is now forecasting shipments of 250 cranes this year - more than three times as many. However this is set to grow to 400 units a year over the next two years as production is further expanded. A new assembly facility has just opened located five kilometres from its headquarters in Colle Umberto to the north of Treviso, near Venice. Total area is 12,000 square metres - of which 3,900 square metres is covered - while much of the rest includes a large concrete yard. The old facility has been retained and is now used mainly for fabrication, while the new facility is purely an assembly hall with three production lines. Total investment is around €3 million.

"The new facility allows us to increase production giving flexibility to cope with the increasing orders and improve the quality of the end product, particularly when one model is very much in demand," says Tomasella. "Our new challenge with the rapid expansion of sales is the growth of the support within the company, particularly service and sales staff."

To maintain its growth Jekko has expanded its dealer network to 30 companies around the world, including China, Singapore, South Korea, Mexico, Colombia, the UK, Canada and USA.

With Fassi taking a 33 percent stake in the company last year, there are several interesting new products including the new JF



Diego Tomasella

tracked articulated loader cranes but also new lithium power packs for the spider and mini crawler cranes. However it is the tracked loader crane which the company thinks will be most popular range in five to 10 years time. Three models have been launched - the JF 545, the JF 30 and JF 40.

Largest is the 15.5 tonne capacity JF 545 with a six section main boom and six section jib, giving a maximum capacity of 600kg at 28.1



The 15.5 tonne capacity JF 545

metres and a maximum lift height with 500kg of 30 metres. In transport mode the unit measures 5.45 metres long, 1.84 metres wide and 2.75 metres high, and weighs 15 tonnes. Outrigger spread is 6.7 metres square and the JF 545 offers a maximum radius of 10 metres at an up and over height of 18 metres. Power is supplied by a Kubota diesel, while options include an auxiliary electric motor, non-marking tracks and a two person 200kg platform with a 31.5 metre working height. Jekko says it has already booked 15 orders for the new JF 545's.

The other two tracked articulated loader cranes include the JF30 and JF40 which are similar in that they have maximum heights of eight and 8.1 metres and a maximum radius off 6.8 metres. Physically similar in size, the JF30 only has a lift capacity of 995kg so does not require a load moment limiter using a lift limiter on the winch. The JF40 has a maximum lift capacity of 2,500kg. Options on both include a 600kg capacity winch, electric power pack and remote control with two manual extensions on the JF30 and a single extension

on the JF40. The JF 30 has an outrigger spread of 3.4 metres and weighs 1,400kg whereas the JF 40 has a four metre square spread and weighs 1,600kg. Both have a 2.4kph travel speed and gradeability of 20 degrees.

"Jekko will not rank among the top two mini crane companies in the coming years, but we can keep pace with the competition," says Tomasella. "Our goal has always been to come up with new ideas for the market. In a conservative market the smaller cranes can open doors."

New developments include a new colour scheme and decals from next year, the launch of a new MPK05, a new hydraulic jib for the SPX312 and a new nine tonne capacity SPK90 - the big brother of the SPK60.



There are plans for a new nine tonne capacity SPK90 - the big brother of this SPK60



Jekko's new facility will help boost production to 400 units per year over the next two years

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