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Limited choice

Large Rough Terrain scissors do what it says on the tin... a go anywhere lift with a big platform and a good capacity to make working at height on heavy industrial fit-out work, cladding or large commercial developments as easy and as safe as possible.

The largest scissors - over 28 metre working heights - are finding an increasing number of buyers in Germany, Austria, the UK and the Netherlands many of them now with overall widths of 1.3 metres or less for narrow aisle work such as high cube warehouse racking etc. Although a specialist sector of the market, it is growing as internet shopping creates more demand for semi-automated warehouses and logistic smart hubs. And as these developments become more popular, building heights have gradually increased to more than 30 metres.

For many years, demand for large RT scissors has been inextricably linked with the economic state of the commercial construction market - ie feast or famine. With increased stability since the financial crash of 2008/9 driving the growth of these 'mega sheds', many rental companies have invested heavily in this type of machine with some focussing on providing add-on attachments to help with getting the job done more easily.

From an equipment view point, there are very few manufacturers offering working heights of more than 20 metres, let alone 30 metres - the largest having been 33 metres for many years. Unlike with boom lifts scissors do seem to have reached a plateau. This is down to the fact that to go higher requires either additional scissor stacks which would make the machine higher and heavier, or longer scissor arms in order to provide more lift per stack. Either way with stowed platform heights already in excess of 2.5 metres, overall lengths of seven metres and a total weight of 33 tonnes, anything bigger would be



Only a handful of manufacturers offer the very large RT scissors - this is a 22.5 metre, 1.2 metre wide machine from PB Lifttechnik

a real challenge to transport.

At the top end of the sector there are only a handful of manufacturers - Holland Lift, PB Lifttechnik and AB Lift (H.A.B as was) as it continues its rehabilitation process - offering RT scissor lifts. Several companies offer lifts up to 20 metres, such MEC with its 60ft 6092RT, the largest RT scissor currently produced in North America, along with Skyjack, Genie and JLG with 50ft models. However these tend to be larger versions of their other mid-range RT scissors rather than the heavy duty, versions produced by the German and Dutch manufacturers.

This lack of choice of new RTs, along with the cost and return on investment has led some companies to refurbish their older units, rather than replace and given the substantial steel structures and stable technology this strategy can make sound economic sense. Nationwide Platforms in the UK has recently given a new lease of life to a number of its older Liftflux scissor lifts, rather replacing with new.

UK based service contractor PSR (Platform Service & Repair) has

already rebuilt a 68ft Liftflux SL205-25 and is now working on an 86ft 260-25 platform. Work included

a complete strip-down, installing new engine, generator and control box, as well as shot blasting and re-painting chassis, scissor arms and platform in the company's blue livery. According to Nationwide, the refurbished scissors were 'as good as new'.

Marc Johnson, technical director at Nationwide Platforms said: "Due to continuing high demand for large scissor lifts we have invested heavily in a range of new Holland Lifts to replace the majority our existing fleet. However the ageing Liftflux models remain popular with our customers, so in addition we selected a number of them to be fully refurbished to complement our offering. This allows us to keep the platforms in our fleet whilst also providing our customers with as-new machines."



PSR (Platform Service & Repair) is refurbishing some of Nationwide Platforms' older Liftflux scissors



Developments

While refurbished machines may be returned to 'as new' condition, they obviously lag behind when it comes to the latest technological developments - in the case of big scissor lifts this might be hybrid or battery electric power units and on-board diagnostics. Rental companies in particular are finding the hybrid scissor lifts an interesting option as it removes the need to run separate diesel and electric models, leading to higher utilisation and potentially lower logistical costs. By using the same machine throughout a contract as they start outside on the open shell working as diesels and then by using the battery pack when time comes to move inside for the fit out work resulting in a higher return on investment.

Rental companies are finding hybrid powered scissors like this Holland Lift an interesting option because of the higher return on investment



Currently the maximum working height available on a heavy duty RT scissor is 33.5 metres and although more height would be useful, any higher has its problems. According to Holland Lift going above 34 metres means difficulties with the overall weight and the ability of users to transport the equipment as we already mentioned. Another limiting factor is the structural material available, although developments in higher strength steels will result in weight savings allowing higher platform heights, this may need a complete redesign of the scissor. Making even narrower heavy duty units - down to 700mm wide for example - is another option but lack of demand at the moment means they will stay on the drawing board for a while.

New products

PB Liftechnik

PB Liftechnik has launched a new 67ft heavy-duty, battery electric RT scissor lift. The 22.3 metre working height S225-24ES 4x4 - rated for both indoor and outdoor duties - joins the company's Top 24 series of large 2.47 metre wide Rough Terrain scissor lifts and follows the recent launch of the diesel version, the PB S225-24DS 4x4. It features a 7.2 x



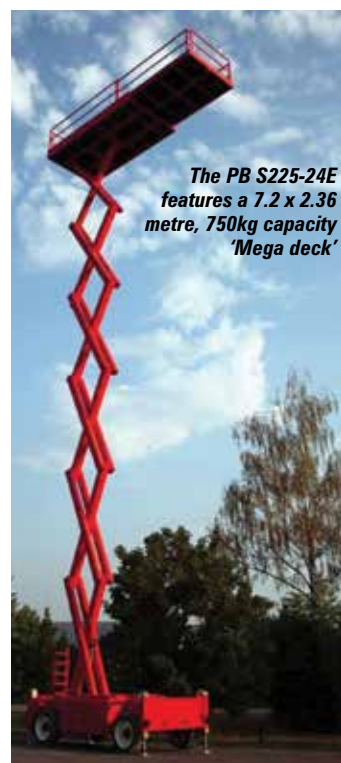
PB Liftechnik has launched a new 67ft heavy-duty, battery electric RT scissor lift. The 22.3 metre working height S225-24ES 4x4.

2.36 metre, 750kg capacity 'Mega deck', with plenty of space for long panels and up to four people. The new machine has an overall length of 4.84 metres and weighs 13.6 tonnes. Overall height is 3.72 metres when stowed although this can be reduced to 2.88 metres by folding the guardrails. Features include four wheel drive, 30 percent gradeability and self-levelling jacks, although it can drive at full height.

In order to keep pace with demand, PB is expanding its manufacturing facilities in Oberbechingen, Southern Germany. The new production hall will have an overall height of 10 metres to the eaves and will be equipped with two overhead cranes. It will also incorporate offices to house both the manufacturing, engineering and design teams.

The PB 225-24 diesel scissors appear to have the performance and features rental companies are looking for having already secured several sales in the UK, which in the past has been resistant to its charms. Although Lifterz already runs a fleet of 67ft battery powered, narrow aisle PB 225-12S scissor lifts it felt that the time was right to add several units of its wider diesel powered sister machine. The diesel unit is powered by Deutz and has an overall weight of just over 12 tonnes.

Lifterz Joint managing director Benjamin Bowers said: "The initial units are already booked



The PB S225-24E features a 7.2 x 2.36 metre, 750kg capacity 'Mega deck'

for customer projects and will be tied up for the foreseeable future. Looking at the demand we have I don't expect to see them in our yard very often."

Powered Access Services (PAS) has also taken delivery of two as part of a £1 million investment to replace its ageing fleet of 11 Liftlux heavy duty scissor lifts.

Managing director David Cadman said: "The German engineering and the attention to detail on these machines makes them simple to operate and will provide us with the opportunity to offer a great quality product to complement our growing fleet."

At the end of last year PB also launched the 73ft PB S240-24D 4x4 mega deck machine, with a working height of 24 metres it has an extended platform that is almost eight metres long by 2.4 metres wide with a 1,000kg capacity.

Holland Lift

Market leader Holland Lift is continuing with its philosophy of focusing on larger scissor lifts and earlier this year expanded its parallel-hybrid technology with the new 66ft HL-220 H25 and 56ft HL-190 H20 which use a diesel engine coupled to an electric motor which can either work independently or combine for maximum power. Overall this technology - also used in the HL-275 H25 - reduces emissions and fuel consumption by up to 40 percent, thanks to the use of a smaller more fuel efficient engine. Also new are the 46ft HL-160 and 56ft HL-190 each available with electric, diesel or hybrid power.

Flagship of the range is the battery-powered HL-330 E14 4WDS/N - the world's highest scissor narrow aisle scissor lift - with a working height of 33 metres and an overall width of just 1.4 metres wide. Platform capacity is 600kg with indoor and outdoor rating and it can drive at full height. The two metre deck extension creates a massive 8.4 metre long platform when extended. Four wheel drive and steer is standard as is the automatic lubrication system. The machine weighs in at a sizeable 24 tonnes. It is only topped by the company's three metre wide Megastar HL340-D30 which has half a metre more working height.

AB Lift/HAB?

AB Lift is the reincarnated German manufacturer H.A.B which went into administration in April 2014.



Largest Holland Lift scissor is the three metre wide Megastar HL340-D30 with a working height of almost 34 metres.

However it appears to have sorted itself out and is back with a new name, manufacturing electric and diesel powered scissor and booms lifts. The scissors have working heights ranging from 6.6 to 32.63 metres working height and the telescopic, articulated and crawler booms range from 16 up to 35 metres.

Some of first units were purchased by its European master dealer, Netherlands-based Collé Rental & Sales. The order included several 32.6 metre working height, 1.39 metre wide S320-12 E4WDS electric 4x4 scissor lifts. With indoor and outdoor certification, 600kg platform capacity, extending deck and drive at full height.



The 100ft H.A.B S320 - 12 E4WDS sold to BAC Hoogwerkers.

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The latest RT scissor lift from JLG is the 53ft 530LRT, with a working height of over 18 metres and 680kg platform capacity.

JLG

The latest Rough Terrain scissor lift from JLG is the 53ft 530LRT, with a working height of over 18 metres and 680kg platform capacity, standard equipment includes an oscillating axle and all steel component covers. The 530LRT has a number of options, including a 7.2 metre long Mega-deck to provide more space for long cladding panels and sprinkler tubes etc and auto-leveling outriggers for quick set-up on uneven ground.

Dingli

At the smaller end of the Rough Terrain market, Chinese manufacturer Dingli has improved and upgraded its 33ft compact JCPT1217RT to the JCPT1217RTI, giving better off-road traction and gradeability. The original White hydraulic drive motors have been replaced with larger, higher powered Sauer Danfoss motors, along with the addition of an oscillating axle and a move from one large hydraulic pump to two smaller independent pumps. The changes have been made in response to customer input, with gradeability increasing to more than 40 percent on the new model. The hydraulic block has also been re-engineered to provide two drive modes, which is more effective with the redesigned chassis which increases ground clearance by 100mm to 290mm.

Overall width of the new machine remains at 1.73 metres/68 inches, while overall length is 3.32 metres with outriggers installed, or 2.67 metres without. Platform capacity is 450kg, on the main 2.5 by 1.55 metre deck, reducing to 236kg on the 1.43 metre roll out deck extension. Overall machine weight is 3,870kg.



Dingli has improved and upgraded its 33ft compact JCPT1217RT to the JCPT1217RTI, giving better off-road traction and gradeability



Changes include larger more powerful hydraulic drive motors and an oscillating axle

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Levelling at speed

It is 25 years since the first production units of the UpRight Speed Level shipped from the company's plant in Selma, California. The product, with its sigma style lift mechanism, has continued to be a regular seller through all of the subsequent company changes, remaining largely unchanged over its long lifetime. Having outlived the UpRight name, it is now the Snorkel Speed Level. Cranes & Access charts its development up to its recent relaunch and drives the latest model.

Earlier this year Snorkel, now owned by Don Ahern, gave the two-model series a substantial update, complete with a re-launch. Still available in both 26ft SL26 and 30ft SL30 formats with 9.9 and 11 metres working heights, it has been fully revised in terms of hydraulics and electrics, but remains essentially the same machine as the first 10 pre-production test & evaluation machines that were shipped out to key customers in late 1990.

To put its long life into perspective, Rough Terrain scissor lift competitors in the early 1990s included Benford Liftmates, Simon Skyhawks, and the Marklift LS series, while JLG was building European ES scissor lifts in Scotland, Kranlyft was selling Snorkel Wildcats and Genie scissor lifts were not even a 'gleam in the company's eye'.



The first of 10 pre-production Speed Levels - late 1990.

The original UpRight SL26RT began shipping in early 1989.



The Speed Level - an original idea of UpRight engineering vice president Mike Ream - was based on the Rough Terrain SL26RT, which was launched in early 1989 and sold rapidly. In Europe the UK was the major market with more than 200 units delivered in the first 12 months, a substantial success back in those days.

As with the SL26RT all Speed Levels featured four wheel drive, were relatively light in weight although they have grown from around 2,500kg to 3,200kg over the years, had standard wide flotation tyres and an oscillating axle making them exceptional performers on soft ground. In fact the SL26 remains one of the few wheeled machines that can truly cope with soft reclaimed 'polder' ground in the Netherlands and the 'sugar sand' found in parts of Florida.

Unlike the SL26RT the Speed Level's sigma style lift mechanism is mounted on a double trunnion pivot with two large diameter hydraulic cylinders supporting the linkage pivot weldment. The concept - with a number of tweaks and changes - was copied by fellow Californian manufacturer MEC in 2009 and included the addition of a battery



Snorkel SL26RT at work

electric model. MEC made no pretence about what it was doing even adopting the same Speed Level name.

The original Speed Level appeared as a prototype/concept machine at the American Rental Association (ARA) convention and exhibition held in Anaheim, California in February 1990. The first unit levelled up completely automatically on operating the platform lift controller, using dozens of sensors and switches. When the platform reached a height of two metres the system would kick in and the machine would very rapidly level itself in a rather frightening manner. In spite of this the concept was greatly appreciated and orders flooded in at the show. The next nine months were spent converting

the machine into a reliable, practical production product and this meant simplifying it to include a change to manually activated levelling via two toggle switches and a level bubble on the platform controls.

By the time it started to ship in early 1991, a deep recession had hit the USA followed quickly by the UK, and the majority of the rental companies that had purchased them at the show, began postponing and cancelling their orders. The disrupted product roll-out has dogged the product's uptake ever since as by the end of the recession in the mid 1990's market interest had moved on and the initial momentum was lost.

Despite this, sales in the years since have been consistent, with numerous tweaks and revisions



The Speed Level made its debut as a concept machine at the 1990 ARA in Anaheim



Snorkel gave the updated Speed Level a re-launch at Vertikal Days

including the introduction of auto-levelling - which had of course been a key aspect of Ream's original concept - thanks to the improvements in technology and availability of components.

The recent product upgrade and re-launch appears to have triggered a resurgence of interest in the

concept, with Snorkel UK booking a substantial number of orders at this year's Vertikal Days in June.

Cranes & Access recently visited the Snorkel plant in the North East of England and had the opportunity to evaluate the latest SL26SL version of this iconic machine. Improvements have certainly made

the machine smoother to operate and the dual powder coat paint is a major improvement over the original units which were painted outside with water-based paint that relied on the California sun to cure, so winter built units were best avoided. Among the many nice customer focused tweaks, we liked the perforated steel toe-boards and the improved round tube guardrails, as well as the new control box.

However the Kubota diesel installation is a little on the noisy side and would benefit from some sound deadening. The new model retains the ability to level by up to 13 degrees side

to side and nine degrees end to end. The front oscillating axle is always standard, and as with the original, the machine can drive on a side slope while elevated as long as the two axles are parallel. Gradeability is 50 percent and platform capacity 680kg with the standard one metre deck extension. The 11 metre, 590kg capacity SL30SL also available in the updated format.



The updated Snorkel has smoother controls, better covers and better guardrails, we also liked the perforated toe boards

Snorkel comeback

A recent visit by Cranes & Access to the Snorkel UK plant proved to be a real eye-opener with busy production lines and a highly motivated team with a passion to succeed. We chart the chequered history of the company/brand and look at its significant efforts to become a successful global access equipment manufacturer again.

Almost anyone could have been forgiven for thinking that the days of Snorkel - and the UpRight business that it was merged with - were numbered. Both companies had been acquired by Tanfield, a small publicly quoted British company that entered the access market when it acquired SEV (Smiths Electric Vehicles) - which happened to own the remnants of Aerial Access - in 2004. Having bump-started Aerial, Tanfield acquired the UpRight powered access business in 2006 and moved all production to a massive

23,000 square metre facility in Washington, North East England, thanks to a regional grant. It added Snorkel in mid-2007 and then dropped the UpRight name in 2010, rebranding everything as Snorkel.

2+2 = 1

UpRight Snorkel

As is often the case with such acquisitions, two plus two rarely equals the five promised to investors. More often than not it results in a great deal less and in the case of Snorkel, UpRight and



Aerial it was more like 2+2 = 1 and that is being kind, thanks to a wide range of factors, helped along by the 2008/09 economic crisis.

As the downturn gathered pace Tanfield was still trying to be a JLG and was carrying far too many overheads for the size of the business, which by 2012 had shrunk to £41 million - less than 20 percent of the combined revenues of each company prior to

Tanfield ownership. The result was high losses which soaked up the cash pile it had raised through regular issues of new shares which it always seemed to be able to sell.



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The new scissor stacks lined up alongside the scissor assembly line



The boom production line



A stainless steel wear strip for long life

On top of this Tanfield had never invested sufficient funds and resources to sort out the ongoing spare parts issues that it had inherited, particularly with the UpRight business which was suffering from years of management changes and production moves. At the same time other manufacturers such as Skyjack, Manitou and Niftylift were on the rise - not to mention Haulotte which had already taken a sizeable share of the European market - so it was hard to imagine anything but closure for the ailing Snorkel business.

expectations and announced that he was taking the Snorkel business back to its glory days as a full line global manufacturer. Few expected him to succeed. However in the three years since then he has sorted out the spare parts issues by working with suppliers and investing in dedicated inventory, which in itself has re-motivated the parts and service team, many of whom had surprisingly stuck with the business through its darkest days. He has also introduced a range of new scissor lifts with his direct input, and a couple of booms which

in New Zealand, which produces trailer lifts and a compact Rough Terrain scissor lift. The recent visit to the UK plant was a real eye opener, with busy production lines, a highly motivated team with a real passion to succeed and having now the investment to do so. Some of the production practices would be considered 'old hat', with most parts and components going into a production warehouse stock, before being retrieved and moved to the assembly lines and bays on hand trolleys. However it works surprisingly well and the stock of components is reassuring, given the problems the company went through under Tanfield, when payment issues meant machines on-line could not be completed before they reached the end of the line.

Attention to detail

The dual coat powder paint plant is as high-tech as any in the industry and produces a finish that exceeds the industry average. The new models have an attention to detail that is exemplary, with features that would probably be vetoed by companies managed by cost accountants. For example the small slab scissor lift range includes double fold-out doors to allow easy service access in

narrow bays, while a replaceable stainless steel running strip lines the scissor arm extension track, to protect the paint and wear on the chassis frame. A small wander-lead controller is also fitted for delivery drivers or for when taking a machine through a doorway, allowing the main controller to be fixed in place, helping avoid damage and loss during a rental.



A short wander lead controller stores within the guardrails



All units are given a full pre-delivery inspection

Ahern takes a punt

Then in 2013 he stepped Las Vegas-based Don Ahern with an innovative deal that saw him take a majority stake in the ailing business free of charge, on the basis that he would put in working capital, and then purchase the balance of the shares, IF the business met certain profit and cash criteria within the first five years. The move was surprising as Ahern had only just emerged from a bruising, although successful, battle to retain ownership of his main business Ahern Rentals, which had included a spell in Chapter 11 administration. Most in the industry assumed that his strategy for the Snorkel deal was to protect the value of his fleet, which included thousands of Snorkel machines, while ensuring the ongoing supply of spare parts and support.

As has been the case for all of his business life, Ahern defied

are beginning to generate positive reviews and feedback. The company has also become much easier to deal with and is price competitive.

Production back on track

The company now operates from two main production plants - the large Vigo facility on Tyneside, UK and the Snorkel plant in Saint Joseph, Missouri. It has also maintained the smaller Snorkel plant



Small scissors have dual service doors for use in narrow bays



The 23,000 square metre facility is full and busy



Ready to ship