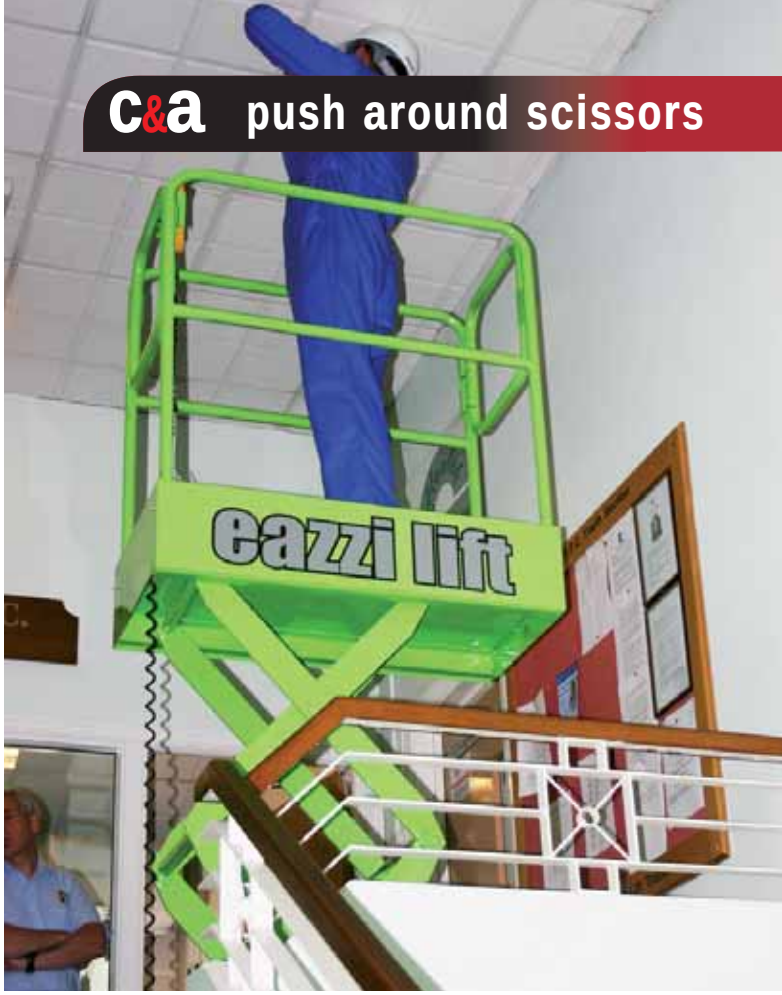
Push around power



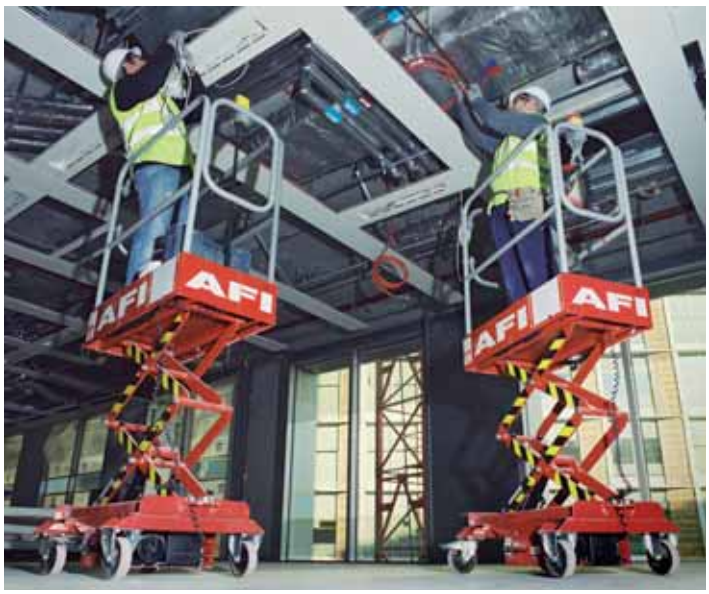
The first push-around scissor lift work platforms date back to the late 1950's and were the predecessors to the modern self propelled scissor lifts. They virtually died out in the 1960's as self propelled's took over. Who would have thought back then that 40 years later push-around scissor lifts would be selling in their thousands?

Of course the increasingly popular modern push-around scissors are all highly compact low-level machines with working heights of between 3.6 and 5.1 metres, essentially they are replacing step ladders, trestles, staging, alloy towers and the more recent podium steps. The product that kicked off this current enthusiasm for low level push-around scissors was the Pop-Up.

Pop Up and Up

Introduced in early 2006 the Pop-Up was perfectly timed and thanks to its neat design, bright distinctive red livery, clever name, attractive price and cost effective packaging took the market by storm. The Pop-Up not only offers a practical cost effective powered alternative to step ladders and podium stands, but was also cleverly designed to be built in low cost countries such as China, with compact packaging that not only minimises shipping costs, but also makes it easy to distribute. This allowed a sales price of under £3,000 for volume orders, encouraging rental companies to purchase large numbers and offer them out at attractive rates.

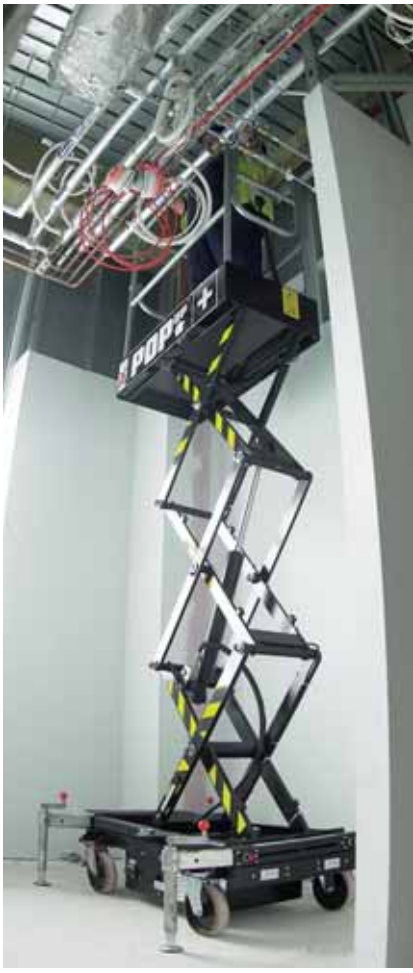
The Pop-Up hit the market at the right time and was rapidly adopted by rental companies.



Pop-Up was initially sold and marketed by Northern Scaffold Group or NSG, however it was such a success that a separate company - Pop-Up Products - was formed at the end of 2006 to sell and market it along with other low level access products such as the Eiger 100 podium platform, the Eiger 200 folding tower, the Eiger 500 class 3 lightweight aluminium towers and the Eiger Deck aluminium walkway. The team at NSG responsible for the Pop-Up, Nigel Woodger, Adrian Blomeley and Paul Gallacher then left NSG to dedicate their efforts to Pop-Up Products.

Plus one

While the Pop-Up was an unqualified success, it soon became clear that its 1.63 metre platform height left room for a slightly higher version with a working height of between four and five metres. The challenge was to achieve this without loosing the attractive features of the original product, which include compact dimensions, light weight and an affordable price. The Pop-Up team began work on a taller version, launching the Pop-Up+ in 2007. The new model included an extra set of scissor arms and a set of outriggers to provide the additional stability, without too much extra weight. The Pop-Up+ features a 2.5 metre platform height, with a working width of 1.3 metres and a total weight of 365kg, now the heaviest in the sector.



The Pop-Up+ has a work height of up to 4.5 metres.

Improving the original

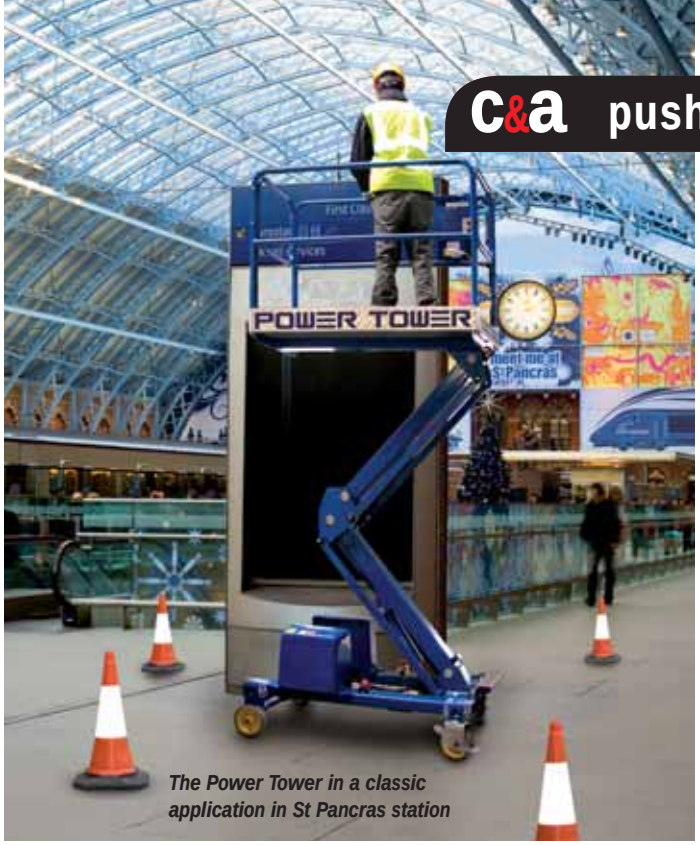
At the same time Pop-Up introduced a number of improvements to its original unit, including larger castors, a hard wired control cable, kick protection on the lower emergency stop and on the upper controls connection point, enclosure of the power pack, relocation of the controller carrier and the relocation of the on/off key to the upper controls.

Power Tower

While Pop-Up was designing the Plus, another industry veteran was looking at the challenge of introducing a higher push-around scissor lift. Brian King, now with CTE UK, was responsible for the first low-level push around lifts in the 1980's and 90's with the Hop-Up made by Go Industries and then the original Power Tower. Both of these products were towable lifts which required outriggers and were seen as entry level trailer lifts, rather than a direct replacement for steps and stands. The Work At Height Regulations were also not even a glimmer in the regulators eye at that time and after a strong start they disappeared.

Anyway that is another story. King saw that the push-arounds time had come and that there was a need to take the concept up a notch from the original Pop-Up. As a result he developed and introduced a new Power Tower, based on a sigma-type lift mechanism, rather than a scissor. The benefit of this is fewer parts, a more rigid platform and greater height, the downside it extra length.

The Power Tower takes the concept to more than five metres



The Power Tower in a classic application in St Pancras station

The Power Tower took the concept up to a working height of more than five metres and yet the basic dimensions did not stray too far from the standard laid down by the Pop-Up.

Push around scissors can easily be loaded onto a small trailer or into a van. Power tower offers both a special trailer and pneumatic tyre options.

It weighs just 310kg, is slightly wider at 780mm but still suited to single doors, is a foot longer at 1.5 metres and is a fraction higher at 1.9 metres. However it does offer a larger working platform, features an automatic castor locking mechanism and most important of all, does not require outriggers.

The lift is produced in the UK and its structure is closer to a self propelled lift than a push-around. This takes it into a different price bracket, but King says that the average sales price is within 10 percent of the Pop-Up+ which he sees as the main competitor. Given that it offers 600mm (2ft) extra height, does not need outriggers, has a larger deck and is lighter in weight, its price seems well pitched.

As a result King says that a number of UK hire companies are standardising on the Pop-Up for lower level work and the Power Tower for customers who need the extra height.

A new contender

As is usual when a market takes off, it catches the attention of others and draws in new competitors. The latest participant is a start up venture - Eazzi Lift, led by two veterans of the alloy tower and powered access rental industries. The principle - Martin Birbeck - started his career 25 years ago with John Rusling, which became Instant Zip-Up. He then joined Access Rentals moving to Nationwide Access when it acquired the company in 1989. More recently he worked with Mike Wishart at the new Access Rentals. His partner on the technical side is Ian Murray of Shropshire-based Access Parts and Repairs which will be providing the after-sales support for the Eazzi Lift and had significant input in the design and development of the new products.

The company has been testing two models of what it says will be a three product range - the Mini, Midi and Maxi. It has aimed to take the best from each of the other two producers. Like Pop-Up it has adopted the scissor lift mechanism and yet to gain the extra height for the Midi it has followed the Power Tower with a slightly longer overall length. It also incorporates an automatic castor brake similar to the Power Tower. The Mini has a platform height of 1.8 metres, marginally higher than the original Pop-Up but with similar overall dimensions and therefore goes head to head with the market leader.

Martin Birbeck of Eazzi Lift

Both the Power Tower and the Eazzi Lift incorporate automatic castor brakes.

The Midi on the other hand offers something new, in that it has the same working height as the Pop-Up+ but does not require outriggers, and retains the same closed/platform entry height as the Mini. Eazzi Lift has achieved this by extending the Midi's length to allow longer scissor arms. At 1.47 metres long it falls between the Pop-Up and the Power Tower. The Maxi is still at the design stage but is likely to have a working height of around 5.5 metres. The question is will the market settle into three height sectors - 1.6/1.8m, 2.5m and 3.1m? Or will it polarise between the two extremes? Much will depend on price and distribution. In actual applications few platform users exploit the full height of the lifts they rent, but there is a tendency for both users and rental companies to take the largest machine available in order to cover all eventualities. In this case though the dimensions and - at least in the case of Pop-Up - price should ensure that the 1.6 metre push around scissor remains a best seller.

The push around scissor passes easily through doors and rides elevators.

A new twist to an old concept

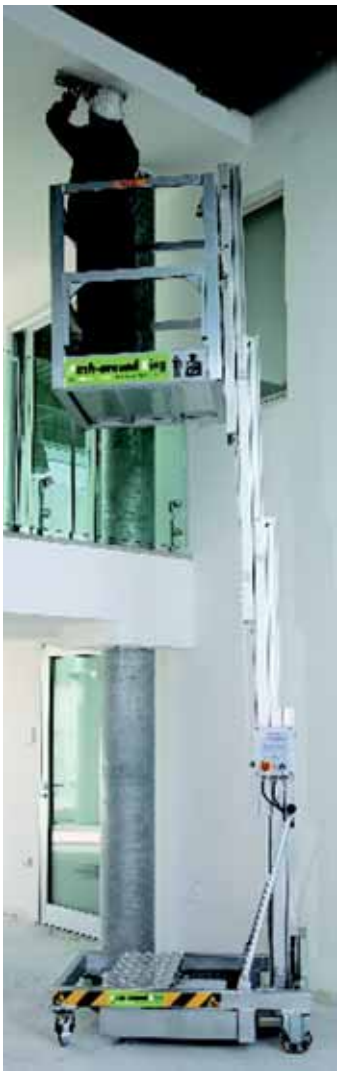
Two years or so ago if you had talked about push around lifts most people would have assumed that you meant one-man mast type lifts, along the lines of the Genie AWP series or UpRight UL range.

These units, which use an aluminium telescopic mast, a small basket and outriggers or a heavy counterweight, have typically started at a platform height of 24ft/7m, (although 20ft/6m versions have always been available) and topped out around 40ft/12m. They are still the least expensive powered access for these heights. However their large footprint has confined them to applications in schools, gymnasiums, tennis courts, museums and office or hotel atriums.

Earlier this year Italian manufacturer Faraone, spurred on by its new UK distributor Kermco, came up with the idea of a low level unit without outriggers or large counterweights, to offer an alternative to the push-around scissors.

The company offers two models the PK60 with a four metre platform height and the PK70 with up to 5.2 metres. The overall dimensions are similar to the Pop-Up at 1.28 metres long by 780mm wide, but the platform is shorter at 900mm but wider at 780mm, due to the room taken by the mast.

Total weight is 365kg for the 60 - the same as the Pop-Up+ and 380kg for the 70. At 200kg the capacity is lower than the others but still ample for one man and tools.

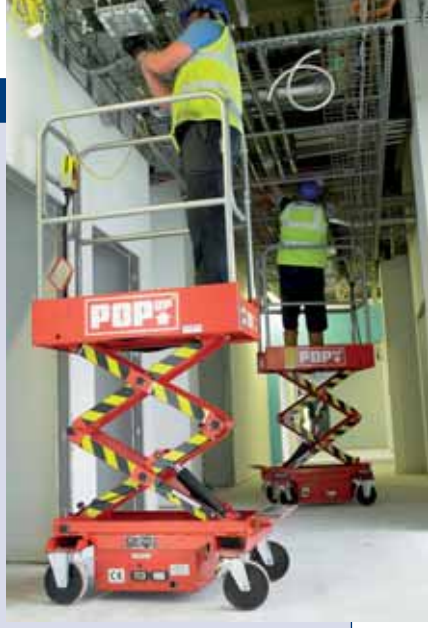


Kermco markets the Faraone as the 'Push Around King' in the UK.

Hospital Pops Up

The Balfour Beatty/Haden-Young joint venture is using more than 75 Pop-Ups on the £570 million Birmingham New Hospital to provide access for mechanical and electrical works, including specialist installations and wiring. The 1,215 bed hospital, located on the Queen Elizabeth Hospital site in Edgbaston, is expected to be completed in 2011.

Roger Palmer, of Haden-Young, said: "Compared to traditional access equipment, the Pop-Up is much easier to set-up and move around, saving significant production time each day." Ian Maund, senior package manager at Balfour Beatty adds: "Using the Pop-Up on the project has brought a number of advantages, as well as increasing productivity, we have taken a significant step forward in terms of improving the health and safety when working at height. The key benefits of the Pop-Up are its speed and ability to enable workers to access the correct height."



More than 75 Pop-Ups are working on the Birmingham New Hospital.

Pop-Up for fire protection

Pegasus Fire Protection (PFP) the Sighthill, Edinburgh-based fire protection specialists has taken delivery of six Pop-Ups and five Pop-Up+ from the dealer for Scotland - Active Access Solutions. PFP specialises in sprayed and boarded fire protection, as well as a one-stop internal fit-out service which covers:

- Metal Stud Partitioning Dry Lining / Steel Framing Systems
- Boarded or Sprayed Fire Protection / Fire Stopping
- Suspended Ceilings
- Painting & Decorating/ Ames Taping
- Altro Whiterock (Hygienic Cladding)

Boyd Sinclair managing director of PFP said:

"As business owners and employers we are well aware of the impact of the Work At Height Regulations. We have historically used tower scaffold for low level access and MEWP's for higher work. However towers consume time and energy assembling and dismantling. I see the Pop-Up as a way of reducing that time, while giving a consistent level of safety to our tradesmen. Our vision is to lead by example, and a financial investment of this type demonstrates that commitment. I envisage a Pop-Up as a standard part of the tool kit for all our tradesmen."

Andy McCusker (L) of Active Access hands the first Pop-Ups over to Boyd Sinclair.

Push around scissors - so how do they stack up?

Results in bold signify best in class.

Specification	Pop Up	Eazzi Lift Mini	Pop-Up +	Eazzi Lift Midi	Power Tower
Working height m	3.63	3.8	4.5	4.5	**5.1**
Lift capacity kg	240	**250**	240	**250**	**250**
Platform size m	1.01x0.52	1.1 x 0.55	1.01x0.52	1.35x0.55	**1.52x0.65**
O/A width mm	**700**	**700**	700/1300	**700**	780
O/A length m	**1.135**	1.2	1.2	1.47	1.52
O/A height m	1.636	**1.51**	1.8	**1.51**	1.92
Gross weight kg	**225**	275*	365	330*	310

A **Gapo** in the market?

It is rare these days for a brand new product to be launched that is exactly what its specified audience is looking for - particularly in the crane sector. But at the recent SAIE exhibition in Bologna, the Gapo remote controlled dolly was such a product.

Suppliers of self erecting tower cranes always have the problem of loading and unloading the crane from its trailer and then positioning it on site. The very fact that a self erector crane is being used at all usually means that there is very little space to set up the crane and/or access to the site is difficult.

Most suppliers tend to use a telehandler to unload and position the crane, which works well when there is space to manoeuvre but becomes a challenge when facing tight corners or positioning in a small area. If one is not already on site the telehandler needs its own transport and skilled operator.

The Gapo has been designed by Italian company Gruppo Gavarini in conjunction with Potain (in fact the name Gapo is a combination of the two companies - Ga from Gavarini and the Po from Potain). Gavarini has been supplying cranes and construction equipment for more than 50 years. As the Potain dealer for Italy it has a sizeable self erector fleet and is very experienced in moving and installing the cranes. It had the initial idea for a type of mechanised dolly about 15 years ago and built the first prototype around four years ago since when it has been refined into the final product unveiled at SAIE.

A variety of hitch plates can be used for all makes of cranes.

Remote controlled power pack

Although two models are offered, most sales will be for the larger capacity GA16. The unit, essentially a remote controlled mobile power pack, has a 16 tonne lifting capacity, a maximum speed of five kilometres an hour, a hydraulically adjustable hitch plate for height and tilt and 180 degree steering, allowing it to turn in its own width. The Gapo has two large drive wheels with two very small, castor-type wheels for balance allowing it to move a crane over difficult terrain and slopes of up to 30 degrees - even down staircases!

Measuring 2030mm long by 1570mm wide and 965mm high, with the hitch in its lowest position, the hydrostatic drive Gapo is powered by a three cylinder, 1.6 litre diesel and weighs less than two tonnes.

The two-wheeled steerable axle.

Handles any make of crane

Although designed in conjunction with Potain, the unit can be fitted with different hitch plates so that it can work with any make of crane or trailer. And with the hydraulically adjustable - for height and tilt - hitch, it has no problem attaching to the crane even if it is not on level ground. Fully remote controlled - using an IMET m550 unit - the unit has all the associated safety advantages and only needs one operator. The unit even has hydraulically acting locating pins that lock the hitch into position making it both safer and easier to use.

Move sideways

Hydraulic locking pins

Gapo also supplies a remote controlled, hydraulically powered two wheeled steering axle that can be used to support the other end of the crane allowing it to be moved sideways. The machine created quite a stir at the show and attracted a great deal of interest from at least three UK crane companies, one of which - Ladybird Crane Hire - placed an order.

The Gapo remote controlled dolly

If there is a down side to this amazing machine, it is the price. With a final figure somewhere in the region of €45,000 it is not cheap. However, its safety and speed benefits may well out-way this, it may also be the difference of getting a crane on site and a hire or not.