

The big benefit of using a mini crawler crane is its small size but these models offer a surprisingly large variety of lifting options. **NIAMH MARRIOTT** reports

Compact power

Mini crawler cranes enable crane operations that were previously not possible, says manufacturer Unic.

“These convenient machines, which are still relatively unknown to many, can be used for a wide variety of purposes, such as installing windows from rooftops, setting up artwork in museums, and performing underground work.

“Mini crawler cranes enable crane operations in narrow places where other machines cannot enter. Their small bodies can go through regular doors and enter elevators to perform crane work on higher floors without scratching the flooring thanks to their rubber crawlers.

“Moreover, electric motor models and battery-powered models that do not emit noxious gases allow for safe indoor operation.

Mini crawlers can also be used when accessing restricted site locations as the

angles and orientations of the crane’s outriggers can be adjusted to suit a variety of locations.

MINI INVESTMENT

Perhaps stretching the ‘mini’ theme, UK-based crane rental company AGD Equipment launched the Sennebogen 613, a 15 tonne capacity telescopic crawler crane to UK and Irish markets. AGD is Sennebogen dealer for the UK and Ireland, selling cranes as well as renting them.

“We sold two to a contractor working at the Tideway job in London a few years ago where they have been working on shafts too,” says a spokesperson for the company.

“We have invested in three of these cranes and so far have found good utilisation for them.”

The machines boast a Tier 5 engine which ticks all the boxes for the London NRMM regulations and HS2. One has already worked on the UK railway project HS2 site at Old Oak Common in London.

Elsewhere in the UK, a small Sennebogen is at work aiding the servicing of a shaft at the Rye Mead Sewage Treatment Works in Hertfordshire for client Barhale.

The high vision cab is ideal for working over shafts to give the operator optimum vision, the company spokesperson adds.

RANGE OF OPTIONS

Italian manufacturer Jekko boasts several mini crawler cranes in its range. The company says its JF235, launched at the end of 2022, is a “chain link between truck cranes and mini cranes.” Currently the smallest model in the range, the design grew from Jekko’s JF545 but has new and improved features.

The JF235 sets the bar higher in comparison with the JF545, Jekko says.



AGD’s Sennebogen crawler crane aiding the servicing of a shaft in the UK

The counterweight, previously located externally on the rear of the crane, is now built in the frame to eliminate the space occupied by the rotating turret at the back of the machine.

The model is fitted with four independent stabilisers directly controlled from the remote. Each stabiliser has a double extension and can rotate by 0 to 45 degrees. The stability level is calculated automatically and displayed both on the remote control and on the onboard screen which, Jekko says, improves safety and stability.

Fitted with a four-extension main boom and a four-extension jib, it can lift up to 6,150 kg and reach a maximum height of 15



“[Mini crawlers] are the ideal ally for industrial maintenance or building.”

JEKKO, Italian crane manufacturer

Italian manufacturer Jekko based its new crawler on a previous design with new improvements





Jekko's other latest offering, its SPX328 mini crane, focuses on simplicity and has been designed for all crane operators of any skill level. It was first shown at the ConExpo 2023 exhibition in Las Vegas, USA.

The crawler crane weighs 2.3 tonnes, with a load capacity of 2.8 tonnes, a maximum height with main boom of 10.5 metres and, with jib, of 12.8 metres. This model is 2.95 metres long, 1.61 metres high and is powered by lithium-ion batteries.

It also has the first 100 per cent electric jib totally independent from the mini crane hydraulics and operated with a dedicated radio control.

Fascan International, the Jekko dealer in the USA, showcased 11 products at the show, including the SPX328, JF235 and MPK20R models launched in October 2022.

SMART SOLUTIONS

The touchscreen can be operated while wearing work gloves and displays real time data, including the maximum payload

at a certain point and the exact position of the load. It has an anti-shock function meaning operators can prevent the weight of a load being snatched off the ground when lifting and it has a self-levelling function that automatically corrects the position.

The crane tracks kick down and it has a hook recovery system. It secures the pulley block in a firm position while travelling with

the crane, preventing it from swinging and bumping. The hook can be stored inside the arm without removing it, which Jekko says reduces downtime and speeds up assembly.

A pump speed control function allows adjustment to the speed of movement and all the crane's accessories can be stored on board.

For stabilisation, there are three rotation and two articulation angles, plus two extension positions for each outrigger.

GREEN MOVES

Having the possibility of being electric is an ideal fit for the applications and capabilities of mini crawler cranes.



The angles and orientations of the crane's outriggers can be adjusted to suit the site

UK-based GGR Group's range of mini crawlers includes its TMC 525 articulated crawler crane with a capacity of 14 tonnes and a maximum lift height of 32 metres. It benefits from continuous slewing which gives good control for load placement, and it can travel on rough or uneven terrain, and slopes. Data can be fed back to the operator via the remote control transmitter during lifting operations.

Now, there is also an electric version. The lithium-ion battery-powered TMC25 retains all the compact dimensions and lifting power of the diesel variant, GGR says.

Elsewhere in the UK, crane rental company City Lifting recently took delivery of two Maeda mini crawlers – a CC985 and CC 1908.

The 4.8 tonne capacity CC985 offers tip heights of up to 17.6 metres and has an optional telescopic boom extension that can take the tip height to 22 metres.

The 8.1 tonne capacity CC 1908 has a maximum tip height of 21.5 metres and a maximum radius of 19.2 metres. It is powered by a Stage V engine and can pick and carry almost 4 tonnes. Its compact size, with a width of 2.5 metres, ensures it can access awkward sites and boasts modern cabin features such as a touchscreen display and safety camera.

These mini marvels are already proving their worth on sites around the world and are on a track to even greater popularity for a wide range of projects.



Mini crawlers enable operations in narrow places where other machines cannot enter

metres with the main boom and 25 metres with its jib. It is still compact in size, at just 4.74 metres long, 1.6 metres wide and 2.6 metres high.

Powered by a hybrid design, the crane has both a traditional engine and an electric power pack.

The company says it is "the ideal ally for industrial maintenance, installation of glazed windows and doors, building applications as well as new ones such as in the forest sector."

Jekko's JF235 boasts hydraulic accessories including a jib

