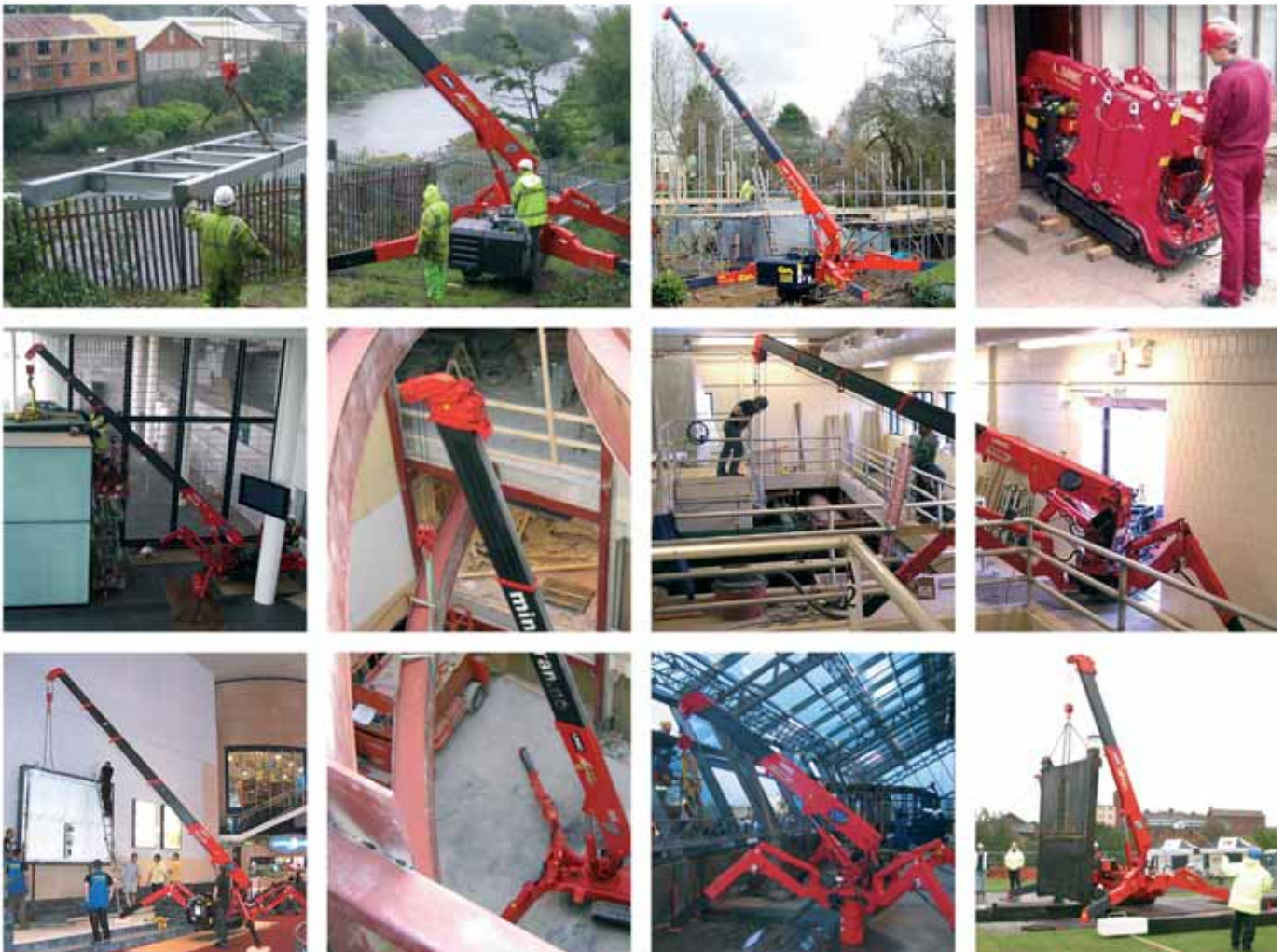


UNIC

CRANES EUROPE



UNIC Cranes Europe is launching the world's biggest mini crane at Bauma. With six tonnes lifting capacity at three metres and a hook height of 19.5 metres, the **A706CL** is now the highest capacity crane in the **UNIC** range. Discover incredible power and reach in the most confined of working environments. With an overall width from 600mm, **UNIC** mini cranes are small enough to get in there, and big enough to get the job done.

A094CR 0.995t x 1.5m (boom length 5.49m) **A095CR** 0.995t x 3.5m (boom length 8.65m) **A295CR** 2.9t x 1.4m (boom length 8.65m) **A376CL** 2.9t x 2.5m (boom length 14.61m) **A506CL** 3.0t x 3.4m (boom length 15.71m)

For more information about UNIC, please phone 01844 202 071, visit the UNIC Cranes website www.unic-cranes.co.uk or alternatively, email the UNIC Cranes sales office: sales@unic-cranes.co.uk

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Brass is best

Angela Busch speaks to CCM an American producer of highly detailed, hand-built model cranes and finds out how such scale-crane models are made.

Grant Peterson knows how to make full size cranes that can lift several tons. He has the measurements, the designs and the necessary knowledge. But at his office in Beaverton, Oregon, in the USA Peterson has more intricate matters in mind. Most of the cranes he and his staff develop weigh less than three kilos.

The model crane industry has blossomed in recent years with many companies now producing die cast models for manufacturers. In the USA a number of niche producers specialise in highly detailed hand-made brass models. They include Peterson's Classic Construction Models (CCM) and Towsley's of Manitowoc, Wisconsin, which makes the Manitowoc 18000 model that

stands over two metres high when erected. That was the exception, though. Most model cranes made by these two specialists are not much more than a metre tall.

Because the models are so much smaller than the real cranes, it seems they'd take less time to manufacture. That's not the case, says Peterson. "From when we get the manufacturer's drawings, it's usually about a year before the models are in-house and ready to sell."



What happens during that process? How is a model crane made? It's not quite as simple as many might think. It starts with an idea. Peterson says he gets suggestions everyday from collectors and contractors alike. CCM chooses cranes for models based on their popularity and size, as well as looking to provide variety in the types of models that CCM offers. Lattice-boom models have been especially popular he says.

After a crane is chosen, the model manufacturer goes to the crane manufacturer to get a copy of the



The full brass models from CCM are exceptionally accurate and detailed.



The Link Belt 348H 1:48th scale brass model



The Manitowoc 18000 stands over two metres tall. The 1:50th model is shown here in Aguado's colours

real design drawings. Some model manufacturers simply send photos and general dimensions to a sub contract model-maker to be interpreted and shrunk down. However as CCM primarily manufactures more-complicated brass models, it completes all of its designs in-house. "We have all the information to build the real machines when we build our models," Peterson says.

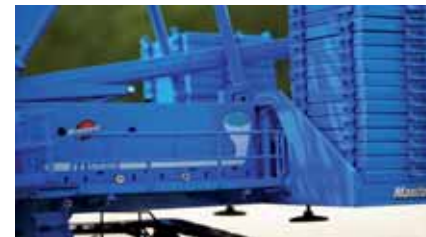
The designs are scaled-down to adapt to the model's size. Some parts, such as a 10mm bolt used in the original crane, cannot be scaled down. So the process becomes a mathematical and artistic puzzle of reducing the size of the crane without altering its appearance.

"We try to get as much detail as we can but also still be accurate to the original design."

After the design is finished at CCM it's sent to a rapid-prototyping machine, which Peterson compares to a 3-D printer. The machine creates a resin prototype of the model that is sent to CCM's manufacturer in South Korea to be used as a pattern to produce the production models.

Brass models take longer to make than the more-common die-cast

models that are mass produced. Die-cast models can basically be poured into a mold to create. With brass, all 800 - 1,200 parts are hand-soldered together. At CCM's manufacturer in South Korea, 20 people work eight hour shifts, five days a week hand-soldering and meticulously assembling minute parts for the models



While not quite as detailed as the CCM the 18000 model by Towsley is still highly accurate. This unit is in Lampson colours.

With all that detailed craftsmanship, it's easy to see why models can take a year to complete and why brass models are significantly more expensive. They run anywhere from \$1,500 - \$2,000; while equivalent sized die-cast models are usually in the \$200 - \$400 price range. The Manitowoc 18000 is unusual in that it uses a brass top with a die cast base and as such is tremendous value for its size at \$680 from Manitowoc's on line show. It is available in the liveries of All Erection, Aguado, Lampson or Demont.