

UNIPLAN E by Leister transforms museum dome into pop culture icon

The right tool for the job

The Boston Museum of Science wanted to find a unique marketing idea to promote its upcoming exhibit on the sci-fi phenomenon Star Wars. It was decided that the building's 60m m circumference, 14 m tall dome was to be transformed into the head the movie's robotic character, R2D2.

An ambitious Project

The Museum of Science reached out to digital printing consultant David King of Lancaster, Massachusetts for the project, as he is known for handling large, technical jobs, like this would be. King immediately knew that there was only one welding tool capable of completing such an out-of-the-ordinary project – the UNIPLAN E from Leister.

Welding on a curve

"We have an RF Welder, a sewing machine, tape and all the standard tricks for finishing banners and building wraps, but the UNIPLAN E was necessary for the R2D2 dome," says King. "The vinyl was simply too large and heavy to pick up and slide into an RF Welder or sewing machine, plus it had to be welded with a curve to create the dome shape. The UNIPLAN E was the only tool appropriate for the job."

Sophisticated approach required

King's first step was to create 20 pie piece-shaped panels of printed material that were almost 3 m wide each, that would then be welded together to create the finished product. Unfortunately at the time, the largest printer King owned was only 1.8 m wide, so each panel was made of



David King tailoring in the installation bay.

two strips of material, which were printed, numbered, laid out and welded together in a 15 m by 14 m installation bay. Next, the 20 panels were welded together to form four



The newly covered dome of Boston's MoS is an actual head turner.

large quadrants, each measuring about 15 m by 14 m. The UNIPLAN E was used for all welding, and was useful for the specific job needs – due to the shape of the quadrants and the finished dome wrap, the panels had to be forced together and welded on a curve instead of a straight line.

Tricky Transport

Once the quadrants were complete, the job moved from the installation bay to the large, flat roof atop the Museum of Science building, about 80 feet below the dome. Each of the four quadrants was rolled up and hoisted onto the roof using the largest man lift King could find to rent. “We had to move to the roof because the quadrants were just so



Joining the quadrants with the UNIPLAN E.

large and heavy. Once they were welded together, they wouldn't fit in the bay any longer,” says King. “The weight of the material was already making hoisting it up on the lift difficult – we wanted to move the final, full piece as short a distance as possible.”

Sky-high assembly

After the first quadrant was lifted to the roof, it was unrolled and laid flat. Then, the next quadrant was hoisted in the same fashion, unrolled and laid out next to the other, and the UNIPLAN E was used to weld the quadrants together on the museum roof. This process was repeated with the remaining two quadrants, and the final section was left unseamed to ensure a good fit when moved to the dome.

Media Attraction

Not surprisingly, a 14 m tall R2D2 head attracted on-lookers and Boston media. When the dome wrap was laid into place, local press were on-site to videotape the placement of the wrap. King was expected to move the final product from the flat roof up onto the dome and get it into place within 20 minutes, with cameras rolling. The vinyl was once



Hauling up the entire wrap from the flat roof top onto the dome.

again rolled up and the man lift was used to move the wrap. Once in place, King and his team of 10 managed to unroll R2D2's vinyl head within their specified time limit.

Modifications were needed

After the media and onlookers were gone, King remained to weld that final seam and smooth out any wrinkles. The finished R2D2 dome consisted of more than 2500 m of banner material, and more than 600 linear meters of vinyl was welded with the UNIPLAN E. “I used the UNIPLAN E



Unravelling the huge plane onto the dome.



David King controlling the roll down of the UNIPLAN E for the final welding.

while hanging from a rope on the side of the dome to weld the finishing touches. I slightly modified the tool for this by adding a handle and attaching it to a rope, so that I wouldn't drop it into the river about 30 m below," says King. "Hands down, no other tool gives me that versatility and ease-of-use."

Within the time frame

David King and his team of printing and building wrap professionals were able to complete the job from start to finish in less than three weeks, thanks largely to the efficiency and versatility of the UNIPLAN E.



The finished R2D2 dome with a 197-foot circumference.

Digital printing, fabrication and assembly: David King and team, Lancaster, Massachusetts, www.MarketKing.com
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