

# Inspect More Pipe

Digital Universal Camera from CUES combines high image quality with increased production

By Kyle Rogers

**P**roductive video pipe inspection requires a skilled operator. Advanced equipment alone won't get the job done. Still, with the right system, an already productive camera operator can be even more productive.

That's the guarantee CUES makes with its Digital Universal Camera, says regional sales manager Chris Parker. The camera was among the equipment CUES had on display at the 2016 Water & Wastewater Equipment, Treatment & Transport Show.

"I always use the analogy, you can give someone a Ferrari, but you can't make them drive fast," Parker says. "It's the same with the DUC. It's a production device, but there's no way we can promise production. What we can promise is the quality the customer can receive."

Image quality is one of the top features of the DUC system. At 3.1 megapixels, Parker says it delivers about eight times the quality of the average analog camera system.

"That detail allows for the rapid condition assessment of basically any pipeline asset," he says.

High-resolution imagery combines with features that give a camera operator an opportunity to be more productive: a wide-angle lens that provides a 360-degree view of the pipe's interior and continuously scans, taking four snapshots a second. Those images are stitched together to create several different deliverables — video that allows for the ability to virtually pan, tilt or zoom to any area of interest; a flat, unfolded view of the entire pipe for quick review; and an expanded flat view that allows for close-ups of specific defects. That continuous scan allows the operator to run the camera through the pipe without stopping to pan and tilt.

"When you remove that aspect of pipeline inspection, you can travel at a very high rate of speed, upward of 40 feet per minute in an 8-inch pipe," Parker says. "That's why you're able to go and take care of a 400-foot segment in about 12 minutes, compared to about 30 minutes using the standard pan and tilt."

In addition to the high pixel count, the quality of the images is improved by two key features on the camera's high-intensity LED lights. Some of the LEDs are beneath a frosted surface, diffusing their intensity, while others are not. This allows for better light distribution. It is thrown far down the pipe as well as spread in the immediate area around the camera. The second key feature is that the lights are strobed in sync with the camera's shutter. The result is optimum lighting with less heat.

The DUC has been on the market for about four years, and Parker says the product is constantly being improved. The most recent upgrades have been on the software side and, like the features on the camera itself, are aimed at helping operators be as productive as possible. For example, operators can save their most common observations as "favorites," which allows them to code pipe defects more quickly.

"Instead of going through the process of selecting the defect and coding



CUES customer relations representative Avery Wilson (right) talks to WWETT Show attendees about the benefits of the Digital Universal Camera system. (Photo by Kyle Rogers)

the defect, you can pull up a drop-down list within the software that has all your favorite observations," Parker says. "That's good for inventory items like laterals that are constantly coded every pipeline. With that quick access, you could code, say, 10 laterals in a 400-foot section within 15 seconds."

The DUC is designed for pipes ranging in size from 6 to 60 inches. Parker sees it as a fit for both municipal customers and private contractors. Municipalities can quickly get high-quality data to better assess their infrastructure and make smart capital spending decisions, and contractors can use the same data to better serve their end customers. Even customers who already have a fairly robust pipe inspection program can benefit because they still may not be capturing the high-definition 360-degree views the DUC can provide, Parker says.

"Pretty much everybody is sustaining a production increase, and beyond that they're also gaining quality," he says of current DUC users. "To have both of those things at the same time is rare. Most times, when you increase production, your quality diminishes."

The WWETT Show is a good place to showcase the DUC because there are people who may not know about the technology, although it isn't new to the CUES product line, says Parker.

"It opens up the marketplace," he says. "It makes people aware of the technology, and we're at a position in the industry where we have a lot of the workforce closer to retirement age. There is a younger generation coming on board who has been more exposed to the latest technologies and are maybe more willing to make a change." **c**