

CMP Banding Tool

For more information:

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What was the challenge you set out to solve?

During the COVID-19 Pandemic our crews were asked to maintain 6' of distance from one another, which created a problem when banding large diameter or stubborn corrugating metal pipe (CMP). This task often requires two employees in order to band two sections of pipe together, which would place them too close per the 6' separation guideline. We needed a way to continue critical culvert installations with only one employee banding culverts together.

How did you develop and implement your solution?

It was determined we needed a tool to spread the bands apart to get them over the pipe sections, but also to help pull them back together to begin bolting the band flanges. Someone suggested a scissor jack, so we purchased one RV style scissor jack to test the operation. It was successful, but needed modification. To safely push the flanges apart we welded bolts to secure it in place, but this also double as a way to pull the flanges back together.

What did it take to make this solution a reality?

After purchasing 4 RV jacks at a local hardware store, the crews grabbed a few bolts out of the bin in the shop, welded them to the top and bottom plates of the jacks. Another bolt was welded to the threaded rod of the jack for an impact wrench and socket to aid in quick expansion and retraction. For smaller diameter bands a piece of angle iron was welded on the top and bottom plates of the jack to keep the jack out from in between the band flanges, as it was too large.

What was the cost of implementation?

\$80 for 4 scissor jacks and a few bolts out of the shop bin. The guys had them welded up in about 15 minutes to serve our needs, labor costs of around \$15.

What was the impact and results of your efforts?

The result of these simple modifications to the scissor jacks was nearly effortless operation by one crew member to install CMP bands and keep our crews fulfilling work orders during the COVID-19 pandemic. The benefits are that road were not closed to traffic due to a failing cross road culvert, but we were able to react and complete the job safely. Not only did this allow safe installation of the bands and culvert, but also took responsibility to practice good social distancing and make every effort to limit exposures to reduce and/or eliminate any possible spread of COVID-19. This effort was in the best interest of our employees to protect our staff, their families, and those we may come in contact with.

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