

CHALLENGER SERVICES

A Subsidiary of Sol Industries LLC

4530 S. Jackson Ave.
Tulsa, OK. 74107 USA

TEL: 918-447-0055
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www.challengerservices.com

SPRING SHOE BENDER



The Spring Shoe Bender can be used to **slip bend** concrete coated pipe with **no damage** to the concrete coating. Since its introduction in 1996, the Spring Shoe Bender has become the **bender of choice** in Western North America, almost completely replacing traditional benders.

Designed to replace the segmented style of tractor bending shoe that has been used in the pipeline industry for the last forty years, the **Patented Spring Shoe** has been made to pin to existing tractor bending shoe adapter brackets.

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Just take off the segmented tractor bending shoe springs and rail by removing the pin from the tractor bending shoe adapter. Then re-pin the spring shoe to the same location.

The location should be centered between the boom feet. Height is for the preference of the contractor but should be low enough to not interfere with the boom lowering to the ground. A good rule of thumb is for the spring bars to be level with the boom base pins. Be sure to check all operational clearances.



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BASIC BENDING SHOE OPERATION

1. Basic Operating Procedure:

Position pipelayer with spring shoe mounted on it over the pipe leaving 5' – 6' of pipe past the spring shoe. Secure a nylon sling from the end of the pipe that is 6' past the spring shoe to the pipelayer load line. Place a truck so that the other end of the pipe makes contact with one of the tires. This will prevent the pipe from sliding during the bending process.

Lift up on the 6' end of the pipe until you get the desired bend. Release the load line and check the amount of the bend in the pipe with a digital level or other measuring device. Once you have achieved the bend that you want record the pipe bend with a bent welding rod or with reference to a point on the pipelayer. Move the pipelayer ahead 6" – 12" and pull the load line up until the pipe reaches the prerecorded reference point. Move the pipelayer ahead 6" – 12" again and pull the load line to the prerecorded reference point. The load line does not have to be released each time between pulls because the pipe will slide through the nylon belt on the spring shoe. The distance that you move the pipelayer ahead should be consistent. After 6 to 8 pulls you will have to relocate the sling closer to the spring shoe, continue this process until you have achieved the desired bend.

2. Spring Shoe Setting vs. Pipe OD:

Use the center hole setting. The other holes can be used but there is no difference to the bend result.

3. Measuring Degrees of Bend While Bending:

Follow the procedure laid out in #1. I like to use a digital level to check the final bend or when you are getting close to the final bend. Some of the old hands use a bent-welding rod to sight in the amount of bend in the pipe with reference to the bent welding rod. This is ok for quick reference during the bending, but the final bend check should be done with the pipe and load line in a relaxed position.

Note: Care should be taken to ensure that pipe does not fall and injure any person.