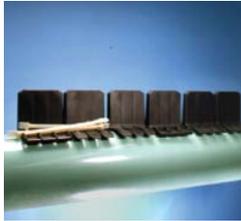


# Ranger II® Casing Spacer Installation Techniques

## Important Pre-Installation Factors:

- A) Always wear protective safety glasses, especially in low temperatures.
- B) Installation in Cold Climates: Keep Ranger II® segments and Slide-Locks in a warm environment while awaiting installation in colder climates.
- C) Installation in Warm Climates: Under hot installation conditions, allow the product to age a couple of hours at ambient temperature prior to assembly.
- D) Review Steps 1-3 on page 27.



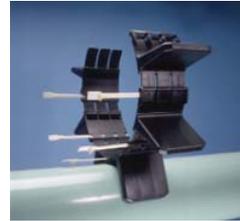
1. Size the Ranger II to make sure you have all the segments and Slide-Locks. Refer to the sizing chart on page 12.



2. Take the segments and align the buckles. Insert the buckles 1/4 of the way into the slots. This will vary after your first installation.



3. Locate the directional arrows on the segment and insert Slide-Lock until the tip exits the end of the segment.



4. Continue the process from the previous step until all segments are put together. You're now ready to wrap the Ranger II around the pipe. Note: In tight installation areas you might need to break the belt into two parts and then wrap the R- II around the pipe.



5. Align the buckles and lock into place. Take the final Slide-Lock and slide into place.

## Always Use Appropriate Protective Safety Wear and Glasses!



6. Insert all Slide-Locks as far as possible by hand. Complete tightening by tapping each Slide-Lock with a hammer, while holding the Slide-Lock against the pipe.



7A. To tighten Ranger II securely to carrier pipe, back Slide-Lock completely out of the slot. If needed, push segments together by hand. **Note:** You may have to release tension by loosening other Slide-Locks.



7B. Re-insert Slide-Locks into segments or until tight by driving Slide-Lock back into position while holding the Slide-Lock against the pipe.



7C. Repeat steps 7A and 7B until Ranger II is secure against the carrier pipe and unable to move.



**Note:** Properly installed slide-locks will rarely be driven all the way in. To secure a tight fit drive as far as possible, but if all are driven completely, (bottomed out) it may not be tight enough. Verify Ranger II casing spacer cannot slide on carrier pipe.

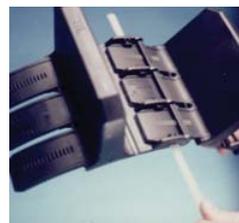
## Trouble Shooting Installation Procedure: Steps A-D



A) If a Slide-Lock should break during installation, remove and replace with a new Slide-Lock.



B) Remove Slide-Lock by backing it out, do not pull it through to remove broken piece. Tap broken piece back out.



C) Take a Slide-Lock and insert the opposite direction of the arrows. Push until you can grab the broken piece and remove.



D) If the Slide-Lock does not completely lock into place the following may have occurred. Two or more segments may have engaged completely. To rectify back Slide-Lock out and readjust segments by pulling them apart by hand. Re-insert Slide-Lock and adjust tightness of the spacer with another segment.

**Slide-Lock will Not Insert Completely.**

