

Pipe Re-Rounding Instructions

The following is a step-by-step set of instructions for pipe re-rounding. Set up is critical and every step should be reviewed and confirmed prior to pipe re-rounding. Failure to take a precautionary approach to re-rounding can result in a failed re-rounding procedure, possible equipment damage and possible injury or death. **NEVER ALLOW A PERSON IN OR NEAR THE MANHOLES USED FOR RE-ROUNDING WHILE PULLING THE RE-ROUNDER. NEVER ENTER A MANHOLE TO SET UP RE-ROUNDING EQUIPMENT WITHOUT REVIEWING THE OSHA REGULATIONS FOR ENTERING A CONFINED SPACE AND ALWAYS VENTILATE AND USE A GAS MONITOR! ALWAYS WEAR EYE PROTECTION. ALWAYS WEAR A HARD HAT. ALWAYS USE FALL PROTECTION DEVICES. FAILURE TO FOLLOW THESE CAUTIONS AND WARNINGS CAN RESULT IN SERIOUS INJURY OR DEATH.**

1. At this point, it is absolutely necessary for you to check and be sure that the re-rounder will slide into the pipe fully at both ends of the section of pipe you will be re-rounding. You cannot re-round concrete, so if it does not slide into the pipe easily, you will need to remove the concrete around the pipe where it enters and exits the manhole.
2. Install the lower heavy duty cross manhole roller guide in the downstream manhole. It is always best to pull the pipe re-rounder in the direction of the pipe flow.
 - a. Lower the manhole roller guide into the manhole in a vertical position using the center loop to connect the cable and the “J” hook clipped to the cable.
 - b. Once the roller guide is lowered into the manhole just above the pipe, release the “J” hook from the cable, the roller guide will fall into a horizontal position.
 - c. Position the roller guide so that the roller is furthest from the pipe that the re-rounder will exit and as close to being centered on the pipe as possible.
 - d. Lower or raise the roller guide so that the roller is positioned as close as possible to the center of the pipe.
 - e. Tighten the small thumbscrew on the side of the bottle jack; it is near the pumping assembly.
 - f. Jack the roller guide in place using the small handle in the pumping assembly. It is important that all of the pointed carbon steel teeth touch the manhole wall. Pump or jack until firmly in place.
 - g. Using a heavy hammer, hit the kicker plates on each end of the roller guide. This will help set the pointed carbon steel teeth. Repeat this several times until the pointed teeth are sunk into the manhole wall about 1/8 to 1/4 inch to assure that the roller guide will not slip out while pulling the re-rounder.
3. Pull a string through the section of pipe to be re-rounded using Hurco’s Ripcord. See owner’s manual for the Hurco Ripcord. Pull the string from the manhole that has the heavy duty cross roller guide to the manhole where you will be starting the re-rounder from.
4. Once the string is through the pipe, install the lightweight roller guide. This roller guide is intended to guide the pull rope through the pipe so it does not cut into the pipe. This roller guide is not strong enough to pull the re-rounder and should never be used for that purpose.
5. Once the string is through the pipe and positioned around both roller guides, tie on to the heavier rope of the motorized rope reel. The motorized rope reel will be located at the manhole opposite of the manhole where the heavy duty cross manhole roller guide is. This motorized rope reel will make pulling the steel cable through the pipe effortless. However, if you do not

have the motorized rope reel, you can pull the cable through by hand. Hurco makes a wide variety of rope reels.

6. Using the Rope reel that you used to tie the parachute to when you pulled the string through the pipe using the Ripcord, reel the heavy rope from the motorized rope reel back to the manhole with the heavy duty cross roller guide.
7. Pull the heavy rope from the motorized rope reel around the roller on the heavy duty cross manhole roller guide and pull to the top of the manhole and secure it so it does not fall back into the manhole.
8. Position the winch system that you will be using over the top center of the manhole with the heavy duty cross manhole roller guide in it. Extend the stabilizers to steady the winch. The Hurco Hurcules Winch system is designed specifically for pipe re-rounding and will make your job easier. However, if you do not have a winch system, follow these instructions;
 - a. Install the Hurco heavy-duty top roller guide in the manhole above the heavy duty cross manhole roller guide. Line the top roller guide up with the cross manhole roller guide.
 - b. Tighten the small thumbscrew on the side of the bottle jack; it is near the pumping assembly.
 - c. Jack the roller guide in place using the small handle in the pumping assembly. This will lock the heavy-duty top roller guide into place.
 - d. Now feed the heavy-duty rope from the motorized rope reel through the heavy-duty top roller guide.
9. Attach the heavy-duty rope from the motorized rope reel to the steel cable. Be sure it is a secure connection so it does not come disconnected while pulling the through the pipeline. Note: this steel cable should be at least 3/8 inch all steel cable. Aircraft cable will work fine and is usually less money.
10. Using the motorized rope reel, pull the steel cable back to the manhole with the lightweight roller guide and pull the cable fully into the manhole.
 - a. If you do not have the motorize rope reel, you will need to pull the cable through by hand.
11. Disconnect the heavy-duty rope from the steel cable.
12. Connect the steel cable to the front of the pipe re-rounder. The re-rounder should have a triple diaphragm pipe cleaner attached in front of the re-rounder. Note, it is best to have your cable supplier put a pull loop on the end of the cable that will attach to the re-rounder.
 - a. The re-rounder will have a removable pin that goes through two pull-tabs. Remove the pin.
 - b. Slide the cable between the two pull-tabs.
 - c. Reinstall the pin with securing "R" clip.
13. Connect the air supply line to the re-rounder. Be sure to follow these important items;
 - a. You must have an oiler in the air line at your compressor. Failure to have an oiler will ruin the vibrator.
 - b. You will find it better to purchase a continuous piece of 1/2-inch poly pipe for your airline. It does not stretch and you will not have joints to catch on pipe joints. Rubber hose can stretch and break and requires numerous connection joints that can catch and damage pipe joints.
 - c. This poly hose can be pulled though by just laying it out on the ground so it does not get tangled or Hurco has a special reel that will hold up to 400 feet of 1/2 inch poly hose and has a built in oiler.
14. Insert the re-rounder into the pipe fully being sure that the steel cable is properly attached and that the poly air line is connected to the short hose and valve assembly at the back of the re-

rounder. Note: you must not remove the valve from this hose. This is the only place the valve can be located and properly start the re-rounder. The re-rounder cannot be started from the air compressor.

- a. Leave the valve in the off position.
 - b. Start the air compressor and put pressure on the poly hose. Minimum of 80 PSI and 80 CFM required.
 - c. Using a quick motion, open the valve next to the vibrator. **Caution! Use eye and ear protection!!**
15. Start pulling the re-rounder through the pipe using the Hurco Hurcules Power Winch.
- a. If you do not have a winch and are using the heavy-duty top roller guide, connect the pulling end or the steel cable to a four wheel drive pickup or pay loader. It must be noted that when you are using a vehicle to pull the cable through the pipe, you must go slowly. Put the four wheel drive pickup on low gear and low four wheel drive. **IT SHOULD TAKE ABOUT 15 MINUTES TO GO FROM MANHOLE TO MANHOLE. GOING ANY FASTER CAN CAUSE DAMAGE TO THE RE-ROUNDER, THE CABLE, THE ROLLER GUIDES AND YOUR PULLING VEHICLE. A CABLE THAT BREAKS CAN CAUSE SERIOUS HARM OR DEATH.**
16. **IMPORTANT NOTES:**
- a. **ONCE THE RE-ROUNDER IS STARTED, YOU CANNOT STOP IT. You must pull it from manhole to manhole without stopping the vibrator.**
 - b. **Never allow anyone in or near the opening of either manhole while pulling the re-rounder through the pipe.**
 - c. **Never enter the manhole to set up re-rounding equipment without reviewing the OSHA 1910.146 confined space regulations.**
 - d. **Always carry a gas monitor when enter the manhole.**
 - e. **Always ventilate the manhole when entering.**
17. Once the re-rounder has reached the manhole with the heavy duty cross roller guide, be sure to pull the re-rounder completely out of the pipe.
18. Now you can turn the re-rounder vibrator off using the valve at the compressor or by turning the compressor off.
19. Once the vibrator has stopped, you may enter the manhole to disassemble the re-rounding equipment. **Be sure to follow the above safety requirements.**
20. Pull your deflection gauge back through the pipe to be sure that the re-rounding process worked.

Please note:

- You cannot re-round pipe that has stabilized back fill.
- You cannot re-round pipe that has an object on it such as a large rock or any heavy object.
- You cannot re-round pipe over 25% deflection.
- Re-rounding will not take a sage out of a pipeline
- Even though re-rounding has been around for decades and has been use to re-round millions of feet of pipe with great success rate, it cannot be guaranteed that it will have 100% success every time. There are many variables, such as those mentioned above, that can cause re-rounding to fail.

Attached are schematics and drawings that will help you in your pipe re-rounding activities. You can also visit our website at www.gethurco.com. You can read more about re-rounding a this website.

