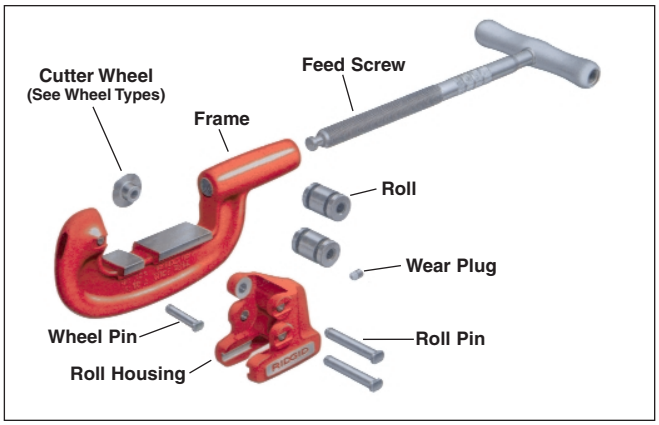
# Proper Use of Pipe Cutters

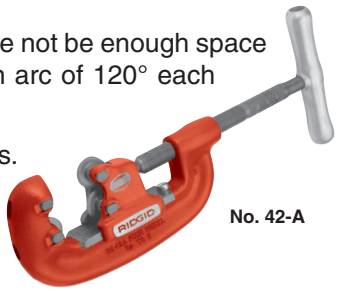
**Pipe cutters are available in a number of different sizes. Use depends on what size, type of material, and the situation under which they are to be used.**




It has always been acknowledged that the best way to cut pipe is by using a pipe cutter. This method assures that the pipe is cut squarely, accurately, and quickly.

The simplest form of pipe cutter is fitted with one cutter wheel and two rollers which keep the cutter square to the pipe and which are rolled around the circumference of the pipe. Sufficient force creates a groove which is gradually worked deeper until it cuts through the pipe wall. No metal is removed; it is only displaced and pushed away by the cutter.

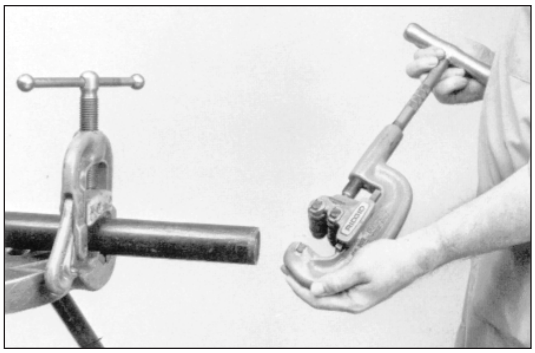
Single wheel cutters must be rotated through 360° to complete the cut. Should there not be enough space to do this, a four wheel cutter should be used. By swinging the cutter through an arc of 120° each wheel will track to the groove cut by another wheel and thus completes the cut.



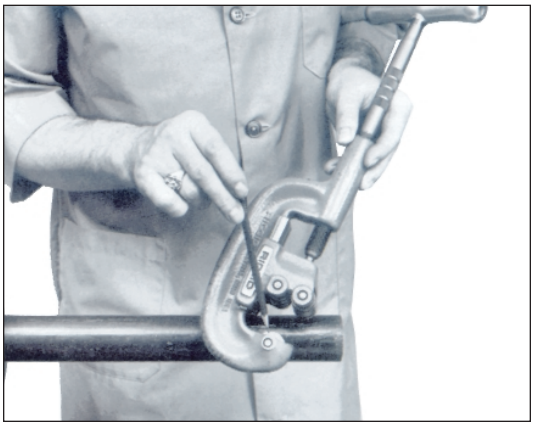

Pipe can, of course, be cut by the use of a hack saws, torches, and other means. However, if the pipe is to be threaded, the end must be squared off. This can rarely be achieved without a tool specifically designed for pipe cutting and may result in badly cut threads and possibly broken dies.

## Select The Correct Cutter

In order to get maximum performance from a tool, one should always ensure that the correct model of pipe cutter has been selected for the job. Definite forms of pipe cutters are available for specific functions from, the simple single wheel tool to the more sophisticated four wheel unit, and those which are specifically designed for use with power drives and threading machines. Each of these tools has its own particular features suited for its intended job. On occasion for lack of the correct tool, some people try to cut pipe with a tubing cutter. A tubing cutter should never be used for such work. Its design and construction make it suitable for cutting through the thin walls of tubing and thin walled conduit only.



**⚠ WARNING** Never try to cut pipe with the wrong cutter type or cutter wheel. This may result in serious injury and damage to the tool and work piece.

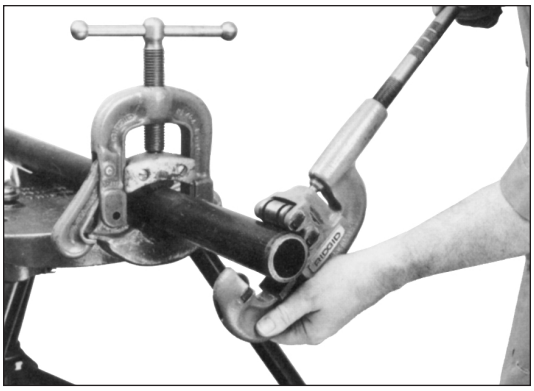


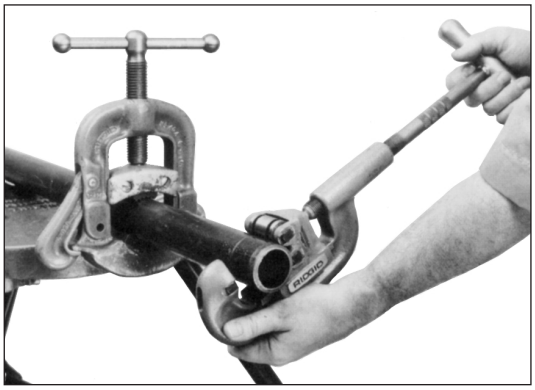
## Check The Cutter Wheel

Always ensure that when selecting the cutter, the cutter wheel is of the type suited to 1) the cutter being used and 2) the material to be cut. Always inspect the cutter wheel before use to see that it is not blunt or damaged in any way.

## Mounting The Cutter On The Pipe

Open the cutter by turning the feed handle counter clockwise and place the cutter on the solidly held pipe so that the rollers are in contact with the pipe. Turn the screw handle clockwise until the cutter wheel makes contact with the pipe. The rollers will steady the cutter and keep it square to the pipe while the cutter wheel will make contact with the pipe itself.





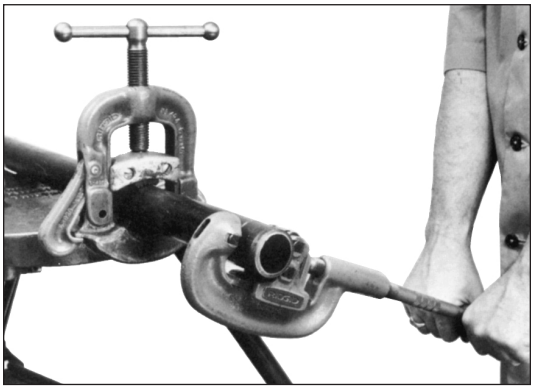
## True Tracking

When the cutter wheel is in contact with the pipe, lightly engage the cutter wheel by turning the feed screw 1/4 of a turn and rotate the cutter through 360° so that the wheel cuts a light groove. Check this groove to see if it "tracks" into the original starting groove. If it does, the result will be a good cut. If not, it will spiral and not cut the pipe. If the cutter does not track, the cutter wheel is probably damaged and should be replaced.

## The Cut

Having ensured a "true track", tighten the feed screw a quarter of a turn and rotate the cutter around the pipe progressively tightening the screw at each turn until the pipe is cut. It should be noted that the roller, as well as steadying the cutter itself, also serves to roll down the burrs thrown up on the outside of the pipe by the cutter wheel.

**CAUTION** Do not force the cutter wheel into the pipe. It will damage and shorten the life of the cutter wheel.



## Proper Maintenance of Pipe Cutters

**⚠ WARNING Do not use a pipe cutter that is not properly maintained.**

Pipe cutters must be kept clean to ensure they function correctly. always make sure that the feed screw, slide, cutter wheels, and rollers are kept free of dirt and foreign matter.

- **Clean tools correctly** – always clean the pipe cutter at the end of each job using a cleaning agent and a wire brush to clean the feed screw, rollers, and cutter wheel.
- **Oil thoroughly** – cleaning agents will cause tools to become dry. Always ensure that the feed screw, slide, rollers and cutter wheels are well lubricated using a suitable lubricating oil. *Do not use thread cutting oil which is not a lubricant.*
- **Inspect frequently** – having cleaned and oiled the cutter thoroughly, inspect it closely to ensure that no damage has taken place to the cutter body, feed screw, rollers; and most important, examine for proper tracking and cutter wheel sharpness. If any damage is detected, replace the damaged or worn part immediately.
- **Store correctly** – always hang cutters, if possible, in a warm dry area.

If you have any questions regarding the care and use of tubing cutters, call or email Ridge Tool's Technical Service Department at (800) 519-3456 or techservices@ridgid.com