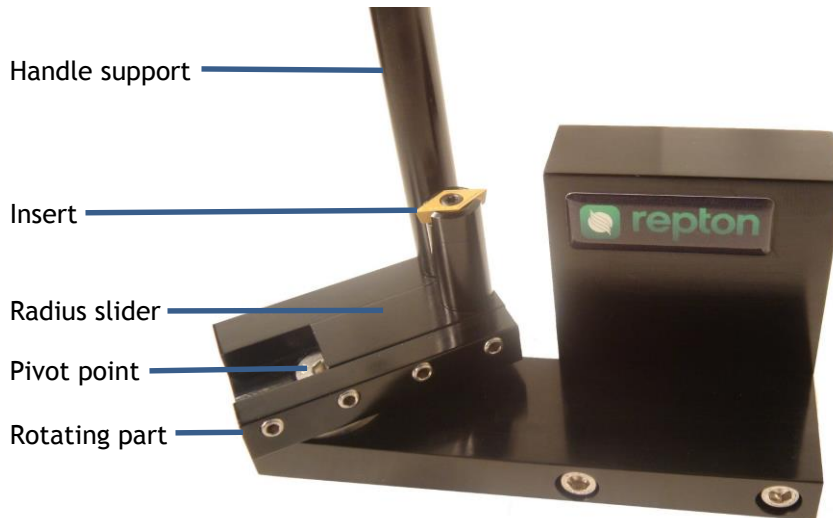


Repton Radius Turner

The Repton RT1 has been designed to make the difficult task of creating radii as easy as possible.



Using the supplied bolt, attach the handle support to the rotating part of the tool. The support should be attached so that when the handle is secured it is perpendicular to the rotating part of the tool.

Mount the RT1 into the tool post as you would a normal turning tool. It is not important that the main body be mounted square, so mount it at an angle to allow for clearance. (See the photo on the next page.)

To begin, orient the rotating part so the handle support is closest to the tool post (that is, closest to the operator). The radius slider can be oriented in either direction to get to the radius you need. Place it whichever way allows the most retaining set screws to engage.

The tool is at zero radius when the end of the radius slider closest to the cutting insert is 27.2 mm from the end of the rotating part. The zero dimension is the same with the radius slider oriented either direction, but note that you are measuring to opposite ends of the rotating part, and working with opposite ends of the insert.

To turn a convex radius, such as a ball, the insert must be outboard of the pivot point (that is, between the pivot point and the handle support). Orient the radius slider with the insert outboard, as shown at the right. The zero radius point is where the radius slider is 27.2 mm from the outboard end of the rotating part. To turn a 20 mm diameter ball (that is, 10 mm radius), move the radius slider until it is 17.2 mm from the outboard end of the rotating part. Lock it in place with the locking set screws.



To turn a concave radius, such as a finger grip, the insert must be inboard of the pivot point. Orient the radius slider with the insert

inboard. The zero radius point is where the radius slider is 27.2 mm from the inboard end of the rotating part. To turn a 10 mm radius, move the radius slider inboard until it is 17.2 mm from the end of the rotating part. Lock it in place with the locking set screws.

Once you have set up the tool, advance the tool onto the work piece making small cuts. It's a good idea to rough out the shape to remove some of the material in bulk with regular turning tools before using the radius turning tool.

The video on the Chris' Tips tab at <http://littlemachineshop.com/4920> shows a quick way to set the tool for the full diameter of a work piece.