

Step Drill Attachment

1/16" through 1/2" (1.5 - 13 mm)

(DAREX Part # 4600)

Installation and Operating Instructions



DAREX

Tech Sheet 4600 Rev. 0997

Installation

Mount the step drill alignment fixture next to the standard alignment fixture as shown using the mounting plate and screws provided. (See Fig. 1)

Operating Instructions

For Resharpener Step Drills

1. For sharpening the end (smallest diameter) of the step drill use the standard sharpening instructions supplied with your sharpener.
2. To sharpen the step, unscrew the wing nut and remove the standard swing fixture assembly. Replace it with the step drill sharpening fixture assembly, set it to the point angle you require on the step, e.g. 118 or 135 angle.
3. Set the step drill setting fixture to the size of the step diameter. Loosely grip the drill in the chuck so that the step protrudes about one inch and insert the chuck into the step drill setting fixture. Slide the step stop over until it hits the small (pilot) diameter of the drill and push the chuck into the fixture as far as it will go. Note: The step should not go beyond the step stop. (See Fig. 2)
4. Rotate the chuck clockwise until the arrow on the chuck aligns with the arrow on the lip relief scale corresponding to the point angle on the step. Tighten the drill in the chuck.
5. With the grinder turned off, place the chuck into the sharpening fixture, rotate the wheel positioning knob to position the drill so the right corner of the grinding wheel just touches the corner of the drill where the small diameter meets the step.
6. Now sharpen the step as you would a normal drill, rotating the chuck in a clockwise direction. (See Fig. 3)

Note: When sharpening is complete, care is needed to remove the chuck and drill from the sharpening mechanism so the pilot doesn't drag along the wheel. You may have to slowly turn the chuck as it is being withdrawn.

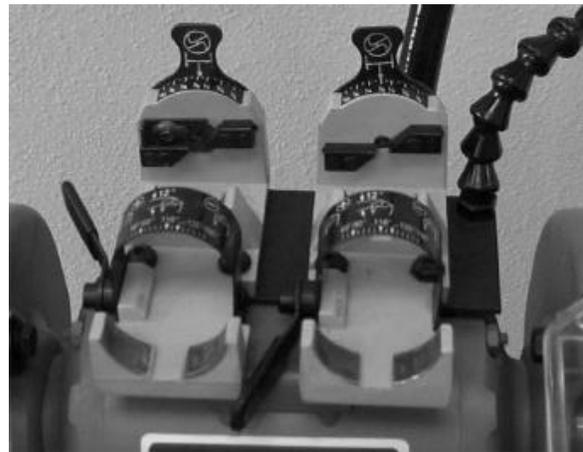


Figure 1



Figure 2



Figure 3

Making a Step Drill from a Standard Drill:

1. Tighten the drill in the chuck letting the drill protrude about a half inch farther than the desired step length.
2. Set the step drill sharpening fixture just slightly to the left of the 180 degree point angle setting (no more than one line). This will give the pilot a small amount of back taper so it won't drag when drilling. With the grinder off, place the chuck into the sharpening mechanism. Rotate the wheel positioning knob to locate the drill off the right side of the wheel just enough to create the size of pilot you require. Initially grind the pilot only about 1/8" long to get the correct diameter. Remove a small amount at a time. Measure the diameter periodically to make sure you don't make it too small.
3. Grinding the pilot length: Rotate the feed knob several marks at a time, moving the drill into the face of the wheel while rotating the chuck in a clockwise direction. Continue feeding and grinding until the desired pilot length is produced.
4. Follow the directions for sharpening a step drill to complete the drill.

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