

Shefcut® blade replacement and adjustment

Blade replacement

1. Loosen clamp screw(s) with hex wrench and remove blade.
2. Clean blade slot. Inspect clamping plate, clamping screw(s), adjusting screws, and seating faces. Replace worn or damaged parts as necessary.
3. Most Shefcut® blades have two cutting edges (see “Blade Options and Cutting Geometries,” page 24). For an unused edge, rotate blade end for end.
4. If installing a new blade, make sure that cutting lead on blade to be installed matches cutting lead ground on pads (and marked on tool).
5. Loosen adjusting screws by one-quarter turn. Insert blade in slot firmly against blade stop pin.
6. Turn clamping screw(s) clockwise until snug, but **not tight**, in order to allow blade movement during setting.
7. Adjust blade as described.
8. Secure blade by tightening clamp screw(s).

Blade adjustment

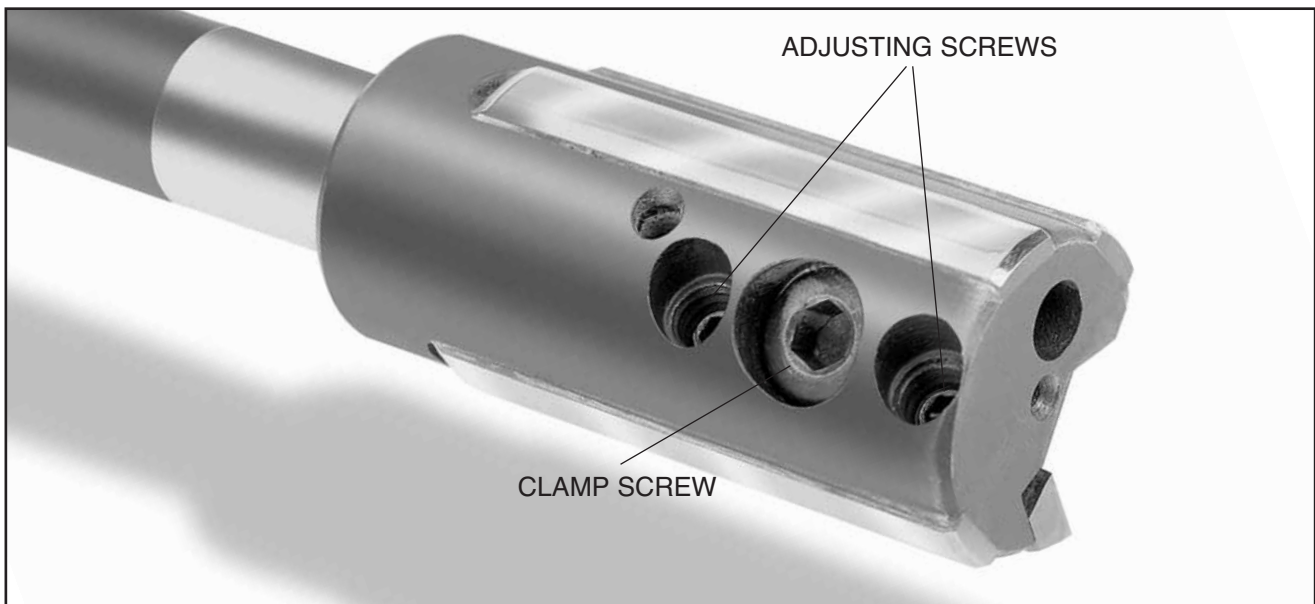
Shefcut tools are micro-adjustable within a limited range. This feature allows the tool to be set to an effective cutting diameter that the tool will produce accurately and consistently.

There are two **blade setting parameters**:

1. **Cut diameter**, defined as the distance from the apex of the blade (i.e., intersection of the two cutting lead angles) to the opposite guide pad.
2. **Back taper**, defined as the distance from the back of the blade to opposite guide pad. The back taper provides relief for the blade in the bore, and ensures that cutting is done from apex of lead intersection to front of blade, so that the tool acts as a single-point cutting tool.

There are several **methods for blade adjustment**:

- A **Cogsdill setting fixture** is the ideal method for highly efficient, consistently accurate tool settings, especially in high production applications (see “Setting Fixtures,” page 34). Blade damage is minimized by use of the setting fixture. The tool is mounted securely between centers. As adjustments are made to the blade, readings are taken with probes and displayed on dial or electronic indicators.
- Alternative methods include:
 1. Bench centers mounted on a surface plate.
 2. Dial indicators; using a micrometer (preferably a pressure micrometer).



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Using a Cogsdill setting fixture:

1. Identify difference in size between **guide pad diameter** and **minimum cut diameter** (also known as the “security zone,” because it must be maintained in order to avoid tool damage).
2. Mount tool between centers.
3. Position front probe about 1mm (.039 in.) behind guide pad lead, with minimum pressure to avoid damaging blade edge.
4. Position rear probe at back of blade at the point furthest from cutting lead.
5. Set indicators on “zero,” using guide pad diameter as the reference point.
6. Using front adjusting screw, rotate, adjust, and check reading until front of blade is higher than guide pads by the amount of the security zone, or approximately .008-.013mm (.0003-.0005 in.) above pad diameter. This will set the blade **cut diameter**.
7. Using rear adjusting screw, set rear of blade flush with pad diameter, or as much as .013-.020mm (.0005-.0008 in.) below pad diameter. This will set blade **back taper**.

Using a micrometer:

- A pressure micrometer is desirable, to ensure accurate setting and to reduce the possibility of chipping the blade.
- Blade edge should rest on anvil of micrometer while micrometer spindle is rocked gently over pad. To avoid blade damage, do not allow micrometer to move across blade edge.