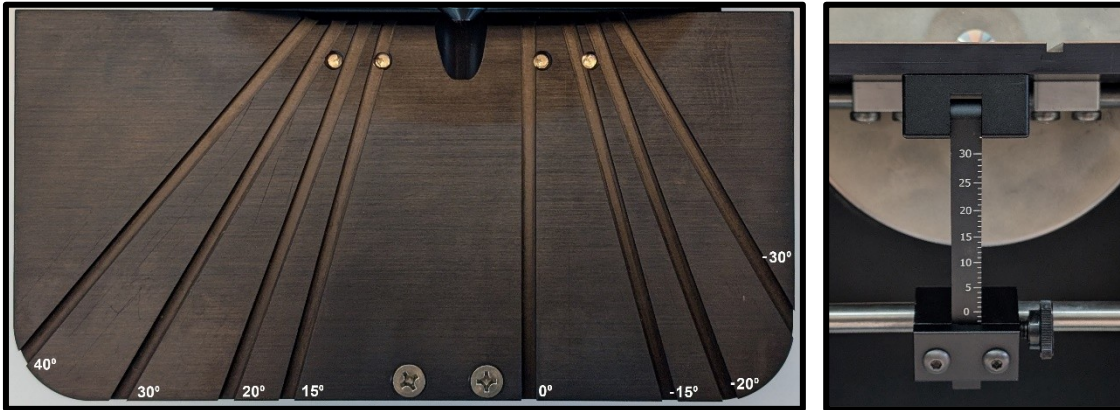


# T6GDS Gun Drill Sharpening

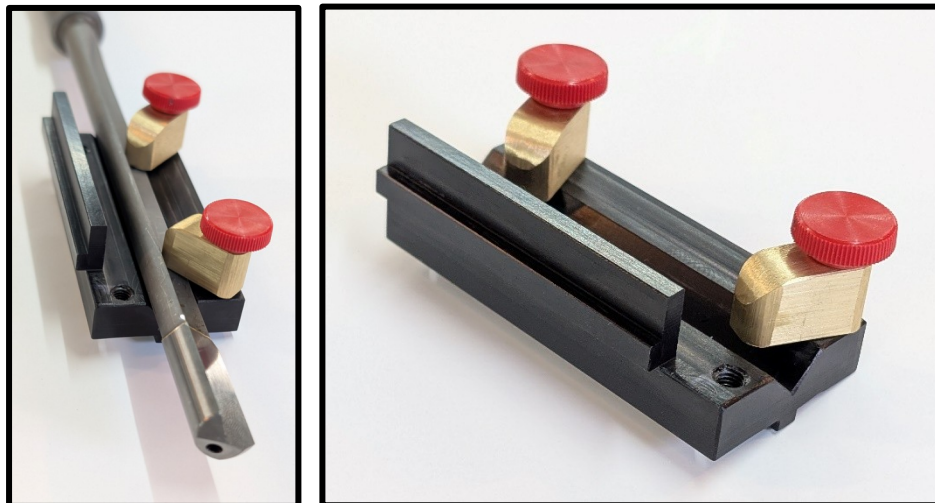
## **Compound Table Angles and Height Fixture**

The image below shows the slots on the compound table angled along the horizontal plane (left). The compound table itself can be angled along the vertical plane (right).



## **Gun Drill Clamp**

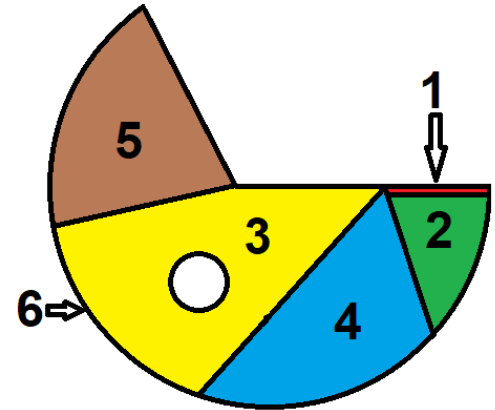
The gun drill clamp is used to hold a single flute gun drill in position using the two brass holders and thumb screws. The ridges on the bottom and the side of the clamp allow for easily orienting the clamp and guide it along the angled slots on the compound table.



## Gun Drill Grinds

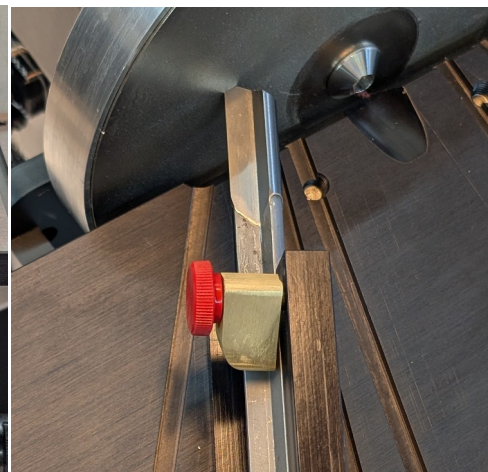
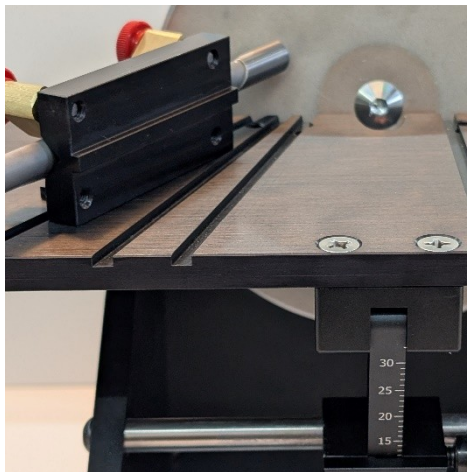
**Note:** The angles suggested below are based on data available and the sample gun drill used for demonstration. Appropriate adjustment to the angles should be applied to obtain the desired grinds for each gun drill.

| No. | Grind Face             | Horizontal Angle                                                                                     | Vertical Angle | Clamp Orientation |
|-----|------------------------|------------------------------------------------------------------------------------------------------|----------------|-------------------|
| 1   | <b>Outer Primary</b>   | +30°                                                                                                 | +12°           | Side              |
| 2   | <b>Outer Secondary</b> | +30°                                                                                                 | +20°           | Side              |
| 3   | <b>Inner Relief</b>    | -20°                                                                                                 | +12°           | Side              |
| 4   | <b>Front Clearance</b> | 0°                                                                                                   | +25°           | Side              |
| 5   | <b>Oil Dabb-Off</b>    | -20°                                                                                                 | +20°           | Bottom            |
| 6   | <b>Hand Chamfer</b>    | Remove drill and freehand at 20° from longitudinal axis. End at the rear edge of the primary relief. |                |                   |



### Steps:

1. Secure the single flute gun drill on the gun drill clamp.
2. Turn on the T6GDS to the appropriate speed.
3. Outer Primary Grind: Set the compound table at +12° on the table height angle fixture. Orient the gun drill clamp on its side along the +30° slot. Slide the clamp to grind the gun drill. Check the grind.



4. Outer Secondary Grind: Set the compound table at +20° on the table height angle fixture. Orient the gun drill clamp on its side along the +30° slot. Slide the clamp to grind the gun drill. Check the grind.

5. Inner Relief Grind: Set the compound table at  $+12^\circ$  on the table height angle fixture. Orient the gun drill clamp on its side along the  $-20^\circ$  slot. Slide the clamp to grind the gun drill. Check the grind.



6. Front Clearance Grind: Set the compound table at  $+25^\circ$  on the table height angle fixture. Orient the gun drill clamp on its side along the  $0^\circ$  slot. Slide the clamp to grind the gun drill. Check the grind.



7. Oil Dribb-Off Grind: Set the compound table at  $+20^\circ$  on the table height angle fixture. Orient the gun drill clamp on its bottom along the  $-20^\circ$  slot. Slide the clamp to grind the gun drill. Check the grind.



8. Remove and freehand chamfer the end of the drill at  $20^\circ$  from longitudinal axis till the rear edge of the primary relief.

