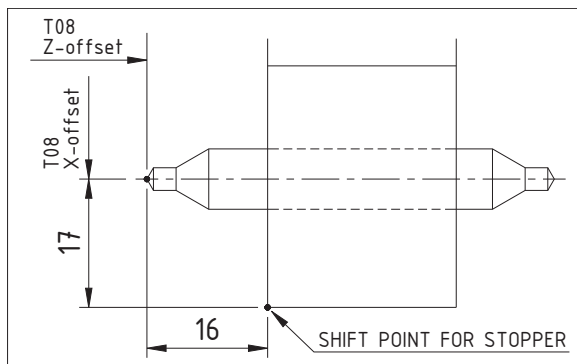


In barfeeding operations, it is often necessary to extend the bar stock a certain distance from the chuck or collet face. For this purpose, a bar stopper is usually mounted in the turret and brought to the Z position to which the bar should be extended. If the bar extension is relatively short, for example, 2:1 or 3:1 ratio between the extended length and the bar diameter, the subsequent machining can usually take place without a tailstock support. For a bar that extends farther from the chuck/collet face, for example 5:1 ratio or higher, the tailstock support is required, which also means using a center drilling operation, often done on a CNC lathe as well.

The objective of this special lathe project is to face and center drill a bar stock extended to a certain length from the chuck or collet face, then apply the tailstock before actual machining of the external contour.

➔ To develop the part program, follow the following conditions:

1. T08 serves as both the bar stopper and the center drill (see illustration bellow for dimensions)
2. T03 is a 35° turning tool (such as a VNMG type, with 0.8 nose radius)
3. The bar stock is $\varnothing 25$ mm, precut to 250 mm lengths
4. The selected bar extension for facing and center drilling is 50 mm from the chuck face
5. The selected bar extension for the OD turning is 200 mm from the chuck face
6. Both the bar stock and the tailstock quill are handled manually (no programmable functions)



➔ The illustration on the left shows the relationship between the setting for offset 08 (tip of the center drill), and the tool corner that will be used as the bar stopper reference point.

In the program, this difference must be included. Wear offset cannot be used, because the offset amount would exceed the allowable range.

