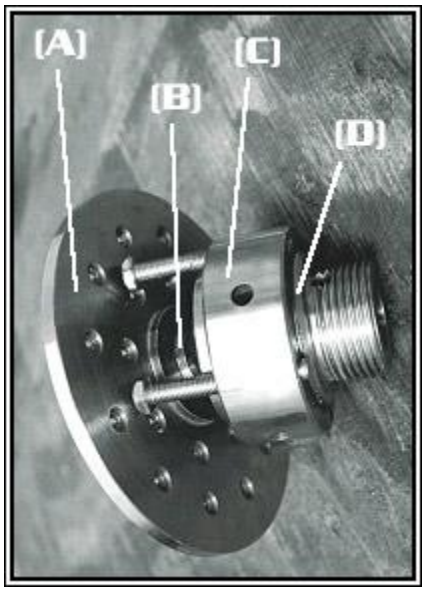
Kelton Angle Faceplate
Guide for Use

The Kel McNaughton Angle Faceplate is designed to allow wood turners to advance their craft by readily producing bowls with side-to-side variation in wall height and to generate patterned surfaces with lineal side-to-side variation.

Off-center, eccentric or out-of-balance turning can generate substantially greater forces than normal turning. This Kelton Industries tool should only be used on substantial, well-built and maintained lathes.

CAUTION! Woodturning is a potentially hazardous activity. Observe all normal wood-turning safety procedures when using the Kel McNaughton Angle Faceplate, along with those specific to this product.

This woodturning accessory is intended only for use by competent, experienced, advanced wood turners !



Structure of the Angle Faceplate:

The Angle Faceplate consists of four sections.

1. A strong steel faceplate (A) with threaded male back and 20 holes for work attachment.
2. A ball (B) (obscured in photograph) into which the male threaded section of (A) screws.
3. A large ring (C) with a partial hemisphere capturing socket that houses the upper half of B.

The ring (C) hosts 4 adjustment/support bolts spaced at 90-degree intervals near its outer

circumference.
4. A section (D) has an internal hemisphere that locates on the bottom of (B) when (D) is threaded into (C). The smaller diameter section of (D) has an internal thread that screws on the lathe mandrel and an external thread that screws into the Kel McNaughton Eccentric Faceplate.

Setup:

1. Detach (A) from the rest of the assembled structure and secure the work to be turned with as many of the 20 provided holes as possible. Strong, deep-threaded wood screws of maximum length and diameter should be used. It must be remembered that the forces involved with angle plate turning work to pull the wood from the screws and hence are more likely to break the piece free than is the case with conventional turning. Shark-toothing or angling the screws in different directions can enhance the security of the mounting.
2. With items (B), (C) and (D) assembled, screw (D) onto the lathe spindle. Position (B) so that the threaded hole is pointing directly outward, away from the lathe spindle. Insert the included round bars into the holes provided in (C) and (D) respectively to tighten the socket and secure the position of (B). Screw the male section of (A) completely into (B). Use the bars again to loosen (B) and tilt the faceplate over to the desired angle. Turn the adjusting/support bolts further in as needed to provide clearance for the desired angle. Retighten to secure (B) in the desired position. Adjust the support bolts so their heads press firmly against the back of the faceplate (A). Lightly tighten the bolts (counterclockwise) with a wrench, avoiding changing the position of (B) or distorting the faceplate.

Operation:

CAUTION! The Angle faceplate is designed to make off-center angling of work as safe, comfortable and easy as possible. Although every effort has been made to make the angle plate user-safe, it is extremely important that every care be taken in its operation.

SPEED. The angling over of the work unbalances it. The centrifugal forces associated with unbalanced turning necessitate that speed with the angle plate never exceed 300 rpm, irrespective of the size, weight or any other aspect of the turned wood piece.

CLEARANCES. Before starting the lathe, ensure that the work has proper clearances. This is particularly important with regard to the tool rest. Remember that work which has proper clearances before changing the center position may not have clearance after the adjustment. Always do a full rotation by hand before starting the lathe.

TAILSTOCK SUPPORT. Always make full use of the tailstock. This is particularly important when turning more demanding pieces and when the work extends a significant distance away from the faceplate.

ADJUSTMENTS. The angle of the faceplate (A) can be varied during the course of the turning. Grooved lines on the circumference of (C) (that run parallel to the support bolts) provide a tracking groove for the use of short engineers rulers for recording movements and determining angles.

WARNING!!! Never operate the Electric Faceplate or Angle Faceplate in a direction that would loosen
the threads.

The Kel McNaughton Angle Plate can be used in conjunction with the Kel McNaughton Eccentric Faceplate or Balancer to counterbalance (within limits) the out-of-balance character of angle plate turning. The Eccentric is the more optimal choice as it provides more flexibility and greater compensation when eccentric offset is combined with angling the work back toward the centerline. See the instructions for the Eccentric or Balancer for instruction on using the Angle Plate in conjunction with these devices.