



Shop Fox Drill Press W1668 – Setup and Upgrades

Setup

- The table surface was not perpendicular (90°) to the spindle.
To correct this, I face-milled the attachment joint of the table holder.
(Note: Locking/unlocking the table/column clamp will change the angle between the table and Spindle, I set perpendicularity for the table in locked position).

Upgrades

- Replaced (original) keyed chuck with keyless chuck
- Added LED work light with toggle switch next to Power switch
- The spindle speed can be adjusted in 12 steps from 250 to 3050rpm by changing the position of two sets of V-belts.
Indicating the set spindle speed requires a visual comparison of belt positions and speed diagram.
- In order to get 'live'-feedback on spindle speed I designed/installed a hall sensor on top of the spindle drive and an electronic tachometer.
- The drill press comes with a mechanical depth scale which measures spindle travel in Inches.
- The scale cannot be adjusted to read zero at the top of the workpiece, requiring offset-calculations for depth of cut measurement.
- I replaced the mechanical scale with an electronic DRO, attached to the original mounting points of the mechanical depth scale.
- The DRO scale can be engaged/disengaged with a pivoting "clutch" to the spindle.
The DRO display is attached in direct line of sight to the front of the headstock, can be adjusted to display inches or metric values, and set to zero at any point of travel.
- The original spindle travel stop requires consists of a threaded rod attached to the spindle
- and two hex nuts to adjust max spindle travel.
- This setup requires two wrenches to adjust max spindle travel.
- I replaced the hex nuts with knurled wheels made from Aluminum which now allows tool-free adjustments.