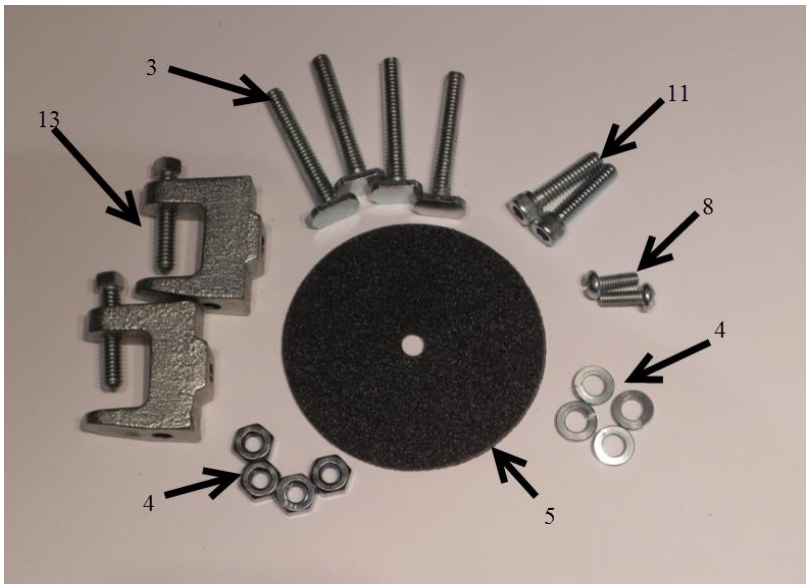
BLACK HOLE DUST CATCHER

Assembly and Installation Instructions

By: HEARTWOOD CONCEPTS

Contents

1. Heavy Duty Aluminum track – 1 each
2. Large heavy duty knobs – 2 each
3. ¼" x 20 x 1 ¾" T bolts – 4 each
4. ¼" x 20 nuts and washers – 4 each
5. Two-sided sandpaper disk with center hole – 1 each
6. Metal hose hanger for 4" Hose – 1 each
7. Swivel head – 1 each
8. ½" x 10-32, machine screws to hold hose hanger – 2 each
9. Sliding base unit – 1 each
10. Fixed arm to attach to sliding base unit – 1 each
11. 1/4" x 20 x 1" Allen head cap bolt – 2 each
12. Telescopic mechanism with fixed upper head and adjustable base – 1 each
13. Beam Clamps-2 each



Thank you for purchasing this product. We hope that its use will make sanding a less dusty and healthier process for you. Before installation, read the instructions fully. This will make installation easier and its use safer and more effective. This purchased Black Hole Dust Catcher may appear different from some of the pictures in this installation manual, and from online pictures or videos. As with any tool used on a lathe, safety is most important. **Never use this system unless tight and secure. Failure to do so, may allow the system to fall towards your spinning project.** Always use the double sided sandpaper disk to secure positioning. Never

adjust the position of the port when the lathe is on. To verify clearance with the port, always rotate the turned object by hand, with the power off, before turning the power on.

Tips and Suggestions

- To get the maximum benefit from this system, use with the included very flexible (very easy to bend!) 4" diameter hose. This will make adjustment in all directions easier and you will get more satisfaction from this product. If the hose is too stiff or hard to bend, it will try to stay straight. This is the most important tip!
- The included dust port has a plastic grid running across the port opening. It is optional, but recomended to snip away this plastic grid (with a wire cutter). This will actually increase the airflow a bit, but increase the risk of loosing pieces of sandpaper and other small objects.
- For easier sliding - occasionally blow out the track with compressed air and lubricate.
- Initially, it is recommended that the position of the lower telescoping tube be located at a very low position, almost all the way down. If you prefer to reposition it in the future, you can fine tune the height based on the size of your lathe and the installed height of the track. You can also cut the aluminum tubes to a shorter length after you have determined it has enough length for your system and all potential configurations. Leave them long enough in case you upgrade to a bigger lathe one day.
- The shortest possible hose length which still gives you full adjustability will reduce air flow resistance.

Assembly and Installation

There are so many different types and brands of lathes, and therefore these instructions will not apply to every machine. Most configurations are covered below, but some creativity may be required for installation on some lathes. Installation requires that the supplied aluminum track be securely attached to the back of the lathe. This can be done using two bolts at virtually any height along the back of the lathe as long as they are below the lathe bed. Positioning the aluminum track as high as possible will allow for full functionality of the system from the front of the lathe.

There is a slot on the back of the aluminum track which will accept the included ¼" x 20 T bolts.

Drilling holes into the body of the lathe or lathe stand will provide the most solid support and rigidity of the installation. No one will ever see these holes even if you decide to sell your lathe, but is not necessary as shown below.

Choose a method outlined below which best suits your lathe configuration.

Option 1: Powermatic, Jet, Nova, Woodfast, Rikon and similar models

Step One-Installing Aluminum Track to Lathe

Preferred method- Install two T bolts on the lathe body, frame or stand. (Figure 1).

Determine where you will mount the aluminum track and drill two 17/64" diameter holes approximately 24" apart. Make sure you have sufficient access and clearance to tighten the nuts from the opposite side of where the track will be mounted. The position of these holes is not critical and can be located so that access to tighten the nuts is maximized. If your lathe is on a wooden base/stand and there is no stretcher/skirt along the back, it will be necessary to add one to attach the track. The two holes should be approximately at the same height. Insert the two T bolts from the back (Figure 1) and thread the nut and lock washer on from the opposite side. Do not tighten the nuts until the aluminum track is in the desired location.

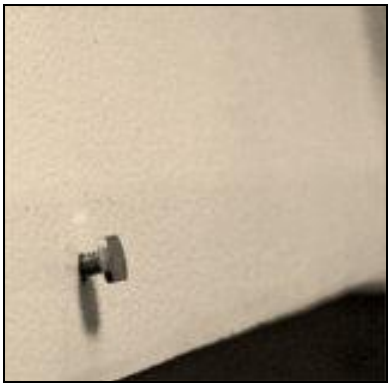


Figure 1

Once the T bolts have been loosely installed, slide the aluminum track onto the "T" bolts with the angled edge on the top to help deflect dust and shavings (Figure 2), and slide into the desired location. Tighten the nuts to hold the track in the desired location.


Figure 2

Option 2: One-way or lathes with rear mounted swinging power control power or rear mounted light stand

It may be necessary to have the aluminum track be mounted in such a way to leave clearance for existing rear mounted hardware/components. A standoff can be made by using a 3" aluminum "U" channel as pictured in Figure 2A. Only two "U" channels are required.

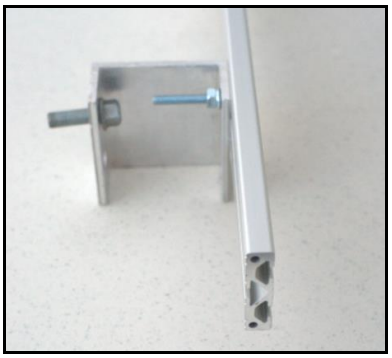


Figure 2A

Option 3: Robust Lathes, One-way lathes without a rear controller and <u>lathes where it is undesirable to drill a hole it the lathe body</u>

Using the two beam clamps included, they can be positioned as in either 2B1, 2B2 and 2B3 or 2C depending on the direction that the clamp needs to be attached. After the clamp is tightened on the lathe in the desired position and the aluminum track is in the correct position, use the nuts to tighten the bolt to both the clamp and the track.

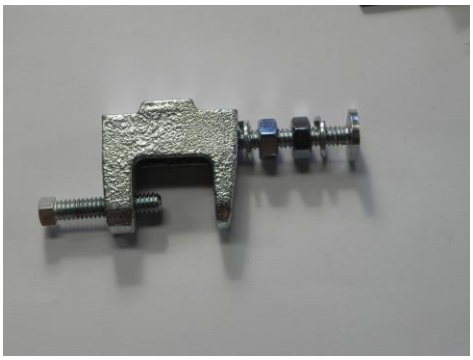


Figure 2B1

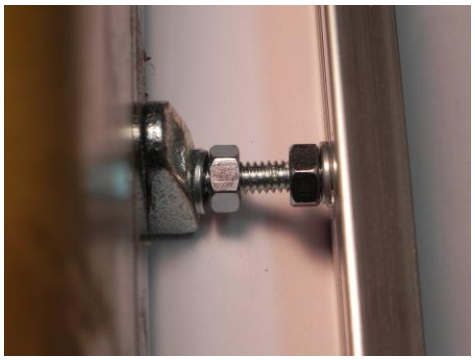


Figure 2B2

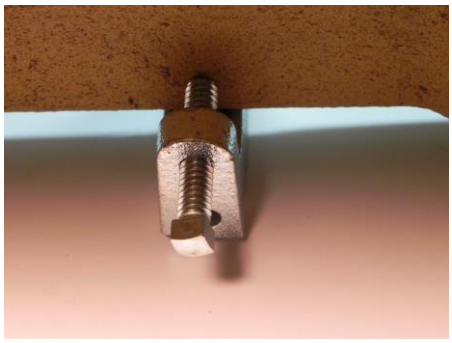


Figure 2B3

Figure 2C shows the clamps used to attach the Aluminum track to a Robust or One-way lathe without rear controls.


Figure 2C

Step 2-Sliding Base Assembly

Assemble the sliding base to the fixed arm with the two ¼" x 20 bolts, using an Allen wrench (not included) (Figure 3). Slide this sled assembly into the upper track of the already installed aluminum track (Figure 4).

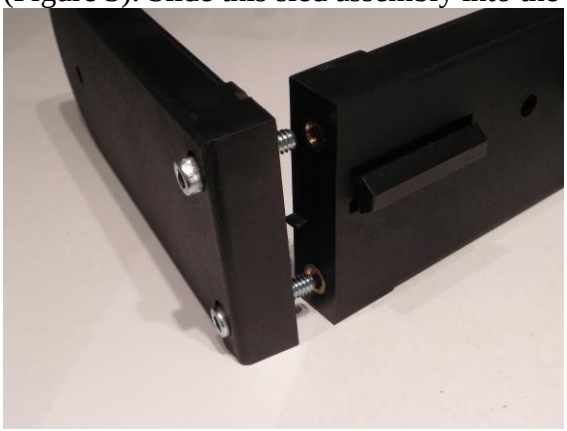


Figure 3


Figure 4

Step 3-Positioning Telescopic Tube Assembly

Slide the larger diameter tube (from the telescopic assembly) through the clamp assembly to access the through hole. See Figure 5. Insert a T bolt. Push the T bolt through the hole in the clamp and seat the T bolt in the slot (Figure 5). Slide the tube back over the T bolt. Tighten the two Allen head screws on the clamp head to hold the tube securely in place. (Figure 6). Do not over-tighten. The tube position may be changed to fine tune the height adjustment ass needed.

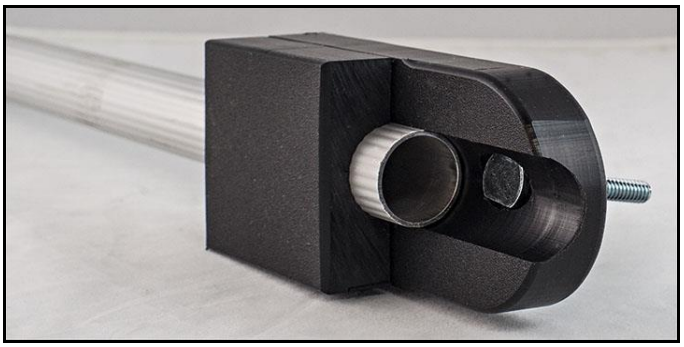


Figure 5

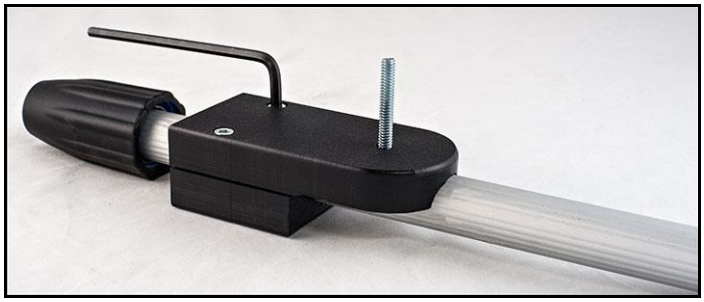


Figure 6

Step 4- Install the Telescopic Tube Assembly

Place the double sided sandpaper disk over the T bolt inserted in Step 3. Slide the T bolt into the pivot hole in the Fixed Arm and attach a knob to the bolt. (Figure 7) Tighten it with the assembly in the upright position.

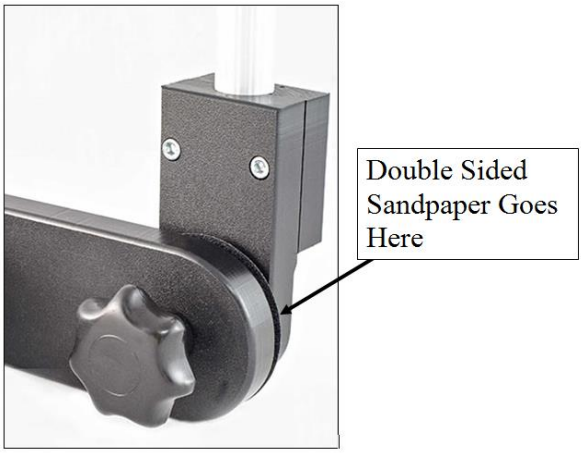


Figure 7

Step 5-Assemble Swivel Head to Hose/Port

(Note: This step is best done prior to attaching the swivel head to the rest of the assembly.) Place a T bolt through the center hole and seat the head of the bolt in the recess (Figure 8). Attach the flexible 4" dust collection hose to the port with a hose clamp. Using the provided hose hanger, secure the port/hose assembly to the swivel head using the two 10-32 machine screws provided (Figure 9). Tighten so that the port/hose assembly does not spin easily. Do not over-tighten. Position the hose clamp as close to the end of the hose as possible to leave room for the hose hanger. (Figure 9). The hose hanger should hold the port assembly and not just the hose. The assembly should not spin very easily. Some spinning will allow for turning the port assembly when/if desired, but can damage the hose if the clamp is too tight. See last page for additional suggestion regarding rotating the port.

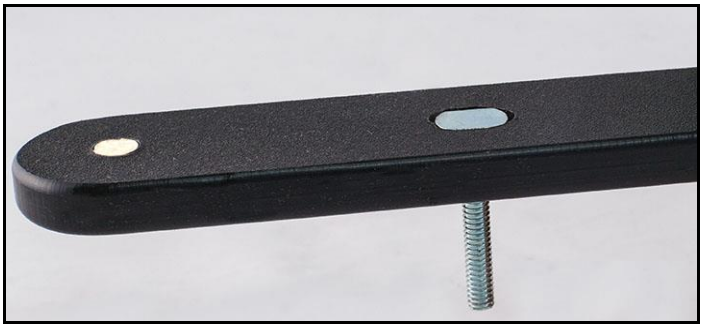


Figure 8

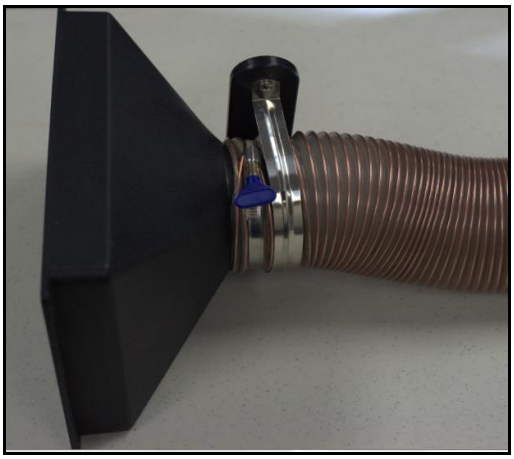


Figure 9

Step 6-Attach Swivel Head Assembly

Place the threaded end of the T bolt coming out of the swivel head, through the hole in the upper block of the telescopic tube assembly. Hold in place with one of the supplied knobs. The angle can easily be adjusted as desired. (Figure 10 and 11 Note: Hose and port have been omitted for clarity.)

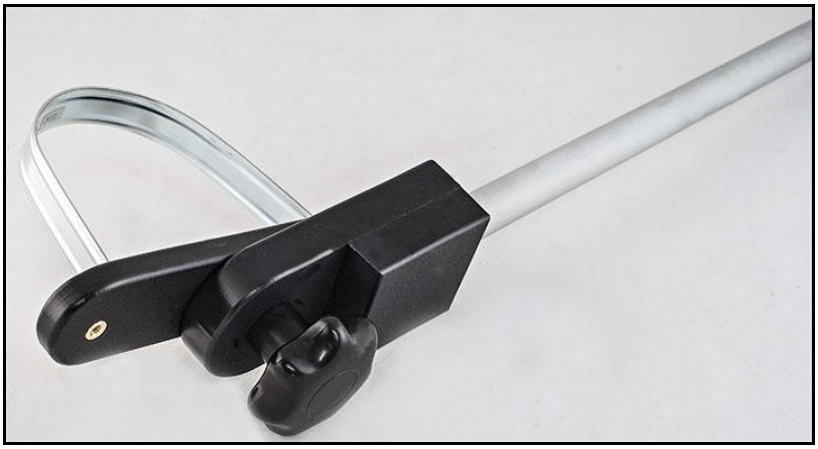


Figure 10

Figure 11: Assembled Dust Catcher

A potential upgrade to allow for swiveling of the port

Swiveling of the port is not often necessary, but it's nice to have and to save the potential wear on the hose, Rockler makes a nice swivel adapter for a 4" hose. **Dust Right® 4'' Swivel** Item # **21476**

Endless potential positions of the system to capture sanding dust are possible…..Congratulations on a nice upgrade to your shop.