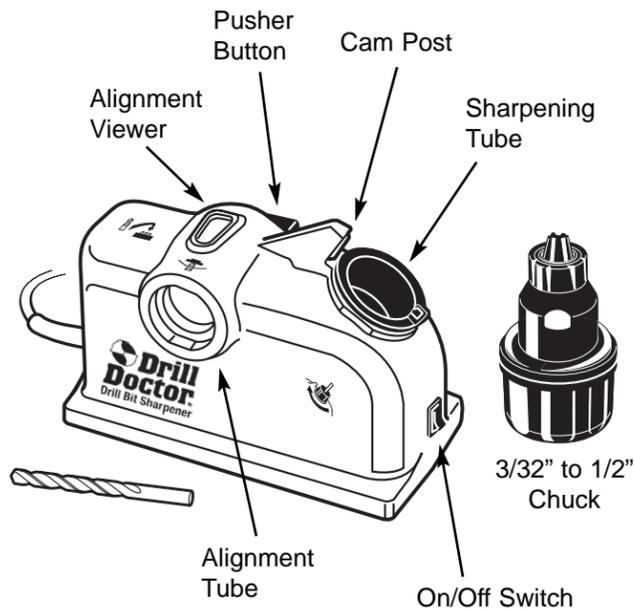


Owners Instruction Sheet

PP20500KF REV 2 (06/00)

Drill Doctor® Drill Bit Sharpener



Drill Doctor® 250 Handyman

Warranty

Your Drill Doctor® 250 Handyman is warranted to be free of defects due to workmanship and design for 1 year from purchase date.

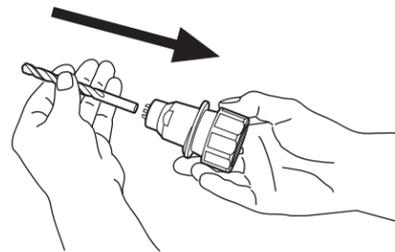
If your Drill Doctor® fails to operate or if any operating problem occurs, contact Drill Doctor® Technical Service toll free at: **1-800-597-6170**.

See warranty card for instructions on warranty service.

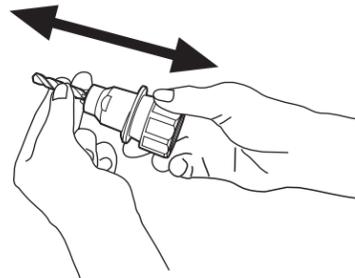
step 1 SIZING THE CHUCK



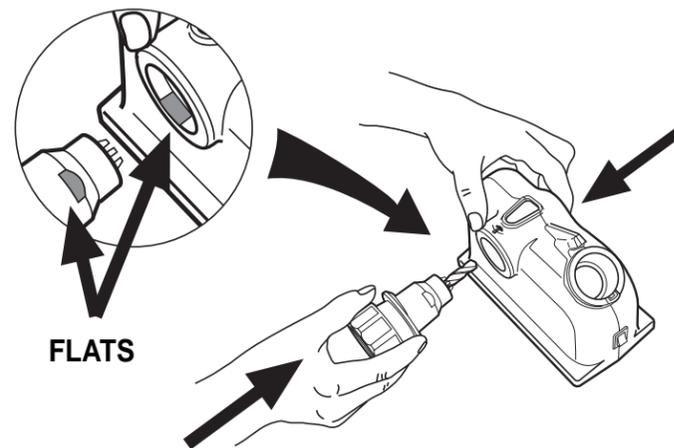
A Insert the drill bit into the chuck. Turn the chuck knob clockwise until it is tight.



B Now, loosen the chuck knob slightly, turning counterclockwise, just until the drill bit begins to slide through the chuck jaws.



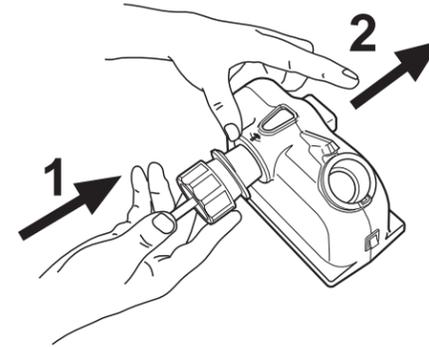
C Press the pusher button in and insert the chucked drill bit into the alignment tube. Take care to match the flats on the chuck with the flats on the top and bottom of the tube.



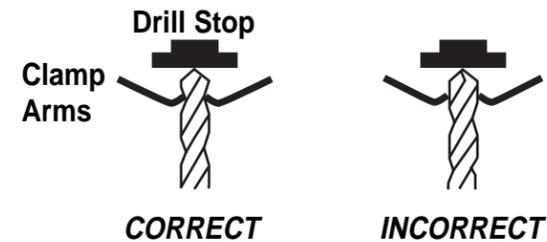
step 2 ALIGNING THE DRILL BIT



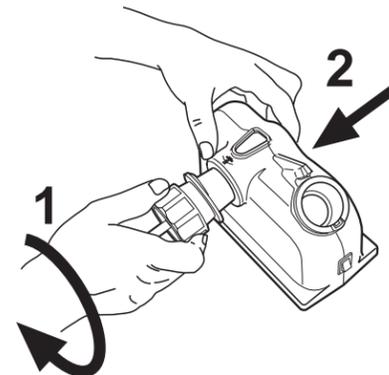
A Gently push the drill bit forward until it meets the drill stop, which is visible through the alignment viewer.



B Release the pusher button and rotate the drill bit until the clamp arms grip the bit at its narrowest width.



C 1. Tighten the chuck clockwise until the bit is securely held in the chuck.

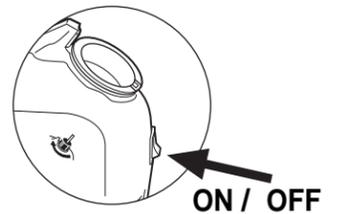


2. Press the pusher button in once more, and then remove the chuck and drill bit together from the alignment tube. Your bit is ready to sharpen.

step 3 SHARPENING THE DRILL BIT

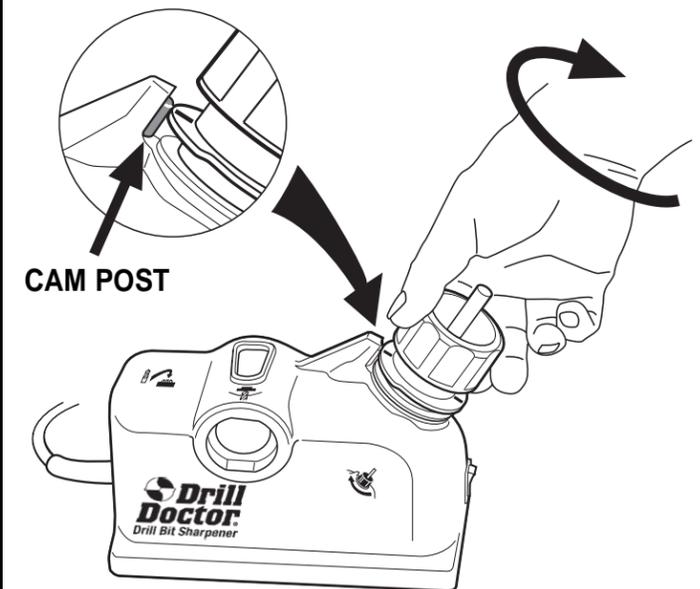


A Turn the Drill Doctor® on.



B Insert the chucked drill bit into the sharpening tube, matching either white mark on the chuck with the cam post at the top of the tube. With a direct, easy pressure, turn the chuck clockwise, white mark to white mark and repeat. Remember you are grinding steel.

A small bit requires a light pressure and may only take a couple of turns to sharpen. A large bit will need greater pressure and will take additional turns or more to sharpen.



Make sure the chuck follows the steel cam post. Avoid putting downward pressure on the chuck. Keep the pressure even, and directed into the tube.

The correct sharpening action will naturally rock the chuck back and forth. This motion should not be prevented. A 1/4" bit will need about 6 complete rotations of the chuck, or 12-20 half rotations, to achieve a perfectly sharp point. More sharpening may be required for very dull or broken bits.

Keep in mind that learning to sharpen drill bits is like learning to ride a bike: it takes a few tries to get it right. Expect to sharpen a couple of drill bits before you get comfortable with your 250 Handyman.

Some Quick Facts about Drill Bits and the 250 Handyman

STANDARD POINT:

This drill bit point is considered a general purpose geometry. It is used for drilling soft or mild materials such as cold rolled steel, aluminum, and wood. Typically the standard drill bit is made of High Speed Steel (HSS). These drill bits are sometimes Titanium Nitride (TiN) coated. They are easily sharpened with your 250 Handyman.

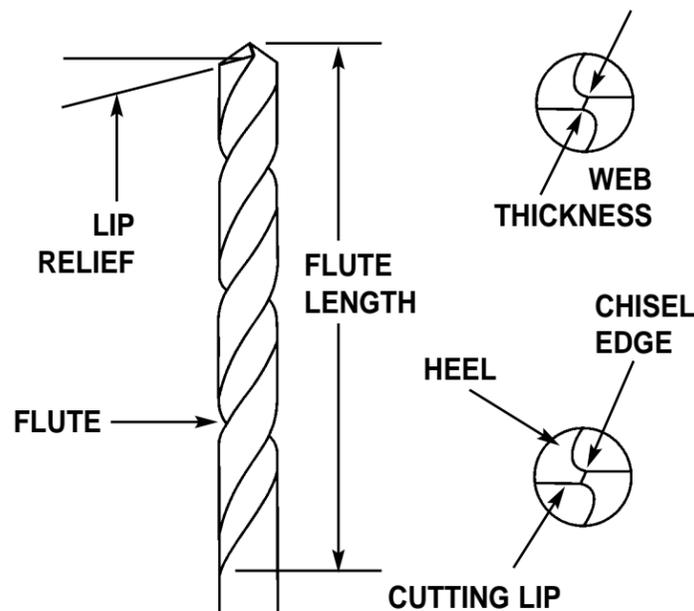
MASONRY POINT:

Masonry drill bits are easily sharpened with your 250 Handyman. The 250 Handyman sharpens the bit with a radial (curved) grind. The masonry drill bit you sharpen with your 250 Handyman will drill well.

SPLIT POINT:

This drill point has an additional set of cutting lips along the tip or chisel edge of the drill. It can be High-Speed Steel, Cobalt and Carbide. Split point drill bits can be sharpened many times with the 250 Handyman. However they work best when the split-point is present.

Anatomy of a Drill Bit



Sharpening Tips and Techniques: Small, Large & Masonry Bits

Please see the video for a complete demonstration.

Small Drill Bits...under 1/8"

1. Size the chuck using the procedure in Step 1, Figure A and B).
2. Press in the pusher button and insert the chucked drill bit into the alignment tube. **Slowly release** the pusher button allowing the clamp arms to grab the bit and pull it to the drill stop.
3. Make certain that the flats on the chuck are engaged with the flats inside the alignment tube. Slide the chuck all the way into the alignment tube. **Using the alignment viewer visually check that the drill bit is up against the drill stop.** If it isn't push the drill bit up against the drill stop. **Remember the clamp arms need to be in the narrowest width of the drill bit fluting.** If they are not, turn the drill bit until they are and then tighten the chuck.

NOTE: The chuck jaws should be aligned straight within the chuck. Look into the back of the chuck at the chucked small bit to check them. If they are not straight then slightly loosen the chuck knob until the jaws are straight.

4. Sharpen the small bit with a light pressure and **only two white-mark to white mark rotations.**

Large Drill Bits...

1. Use the procedure in Steps 1, 2, and 3 to sharpen large drill bits.
2. **The large drill bits will take more white mark to white mark rotations.** Sharpen the entire drill face from cutting lip to heel.
3. **Large drill bits will require increased pressure directed into the sharpening tube.** Note the sound in the video and try to duplicate that pressure.
4. **It may take a couple of complete sharpenings to re-sharpen an especially dull large drill bit.**

Masonry Drill Bits...

1. Size the chuck using the procedure in Step 1, Figure A and B).
2. Press the pusher button, and insert the chucked drill bit into the alignment tube. Push the drill bit to the drill stop and release the pusher button. **NOTE: The clamp arms will not align the masonry drill bit .**
3. To align the masonry bit, **start with the carbide insert in a vertical position, then turn the bit to the right to an approximate 1:00 to 2:00 o'clock position.** Tighten the chuck knob securely.
4. Start sharpening with four white mark to white mark rotations initially. Add an even number of rotations until the insert is sharp.

IMPORTANT SAFETY INSTRUCTIONS



For Your Own Safety,
Read Instruction Manual Before Operating Tool.



Wear Eye Protection.



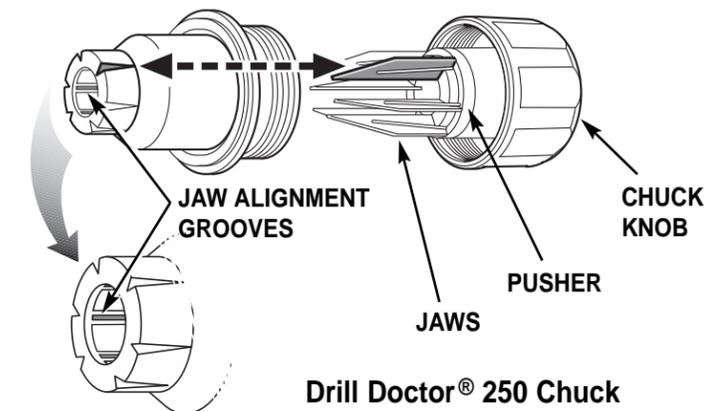
Never touch internal parts of the sharpener when the sharpener is on. The rotating diamond grinding wheel can cause injury.



WARNING:
WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO PREVENT THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY.

MAINTENANCE (Recommended after 25 sharpenings)

It is necessary to give your Drill Doctor® a simple cleaning. Regular cleaning insures proper function and protects your Drill Doctor®. **IMPORTANT! Unplug your Drill Doctor® first.** Shake out the bit shavings from the sharpening tube by turning the Drill Doctor® upside down. Vacuuming works also. Clean inside the alignment and sharpening tubes with a dry cloth. **To clean the chuck: Step 1.** Loosen the chuck until the chuck is apart. **Step 2.** Using compressed air or a small brush remove all grinding particles from the chuck knob, pusher and jaws. Re-assemble carefully, making sure that all of the jaws are in their respective grooves.



Drill Doctor® 250 Chuck