

Chef'sChoice®

Sharpener For Asian Knives



Read these instructions before use.
It is essential that you follow these
instructions to achieve optimum results.

IMPORTANT SAFEGUARDS

When using electrical appliances, basic safety precautions should always be followed including the following:

1. Read all instructions. Every user should read this manual.
2. To protect against electrical hazards, do not immerse the Chef'sChoice® Model 316 in water or other liquid.
3. Make sure only clean knife blades are inserted in the Model 316.
4. Unplug from outlet when not in use, before putting on or taking off parts and before cleaning.
5. Avoid contacting moving parts.

6. Do not operate any appliance with a damaged cord or plug or after the appliance malfunctions, or is dropped or damaged in any manner.

U.S. customers: You can return your sharpener to EdgeCraft's factory for service where the cost of repair or electrical or mechanical adjustment can be estimated. When the electrical cord on this appliance is damaged, it must be replaced by the Chef'sChoice distributor or other qualified service to avoid the danger of electrical shock.

Outside U.S.: Please return your sharpener to your local distributor where the cost of repair or electrical or mechanical adjustment can be estimated. If the supply cord of this appliance is damaged, it must be replaced by a repair facility appointed by the manufacturer because special tools are required. Please consult your Chef'sChoice distributor.

7. **CAUTION!** This appliance may be fitted with a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. *Do not modify the plug in anyway.*
8. The use of attachments not recommended or sold by EdgeCraft Corporation may cause fire, electric shock or injury.
9. The Chef'sChoice® Model 316 is designed to sharpen Asian style knives. Do not attempt to sharpen scissors, ax blades or any blade that does not fit freely in the slots.
10. Do not let the cord hang over edge of table or counter or touch hot surfaces.
11. When in the "ON" position (Red flash on switch is exposed when "on"), the Chef'sChoice® sharpener should always be on a stable countertop or table.
12. **WARNING: KNIVES PROPERLY SHARPENED ON YOUR CHEF'SCHOICE® WILL BE SHARPER THAN YOU EXPECT. TO AVOID INJURY, USE AND HANDLE THEM WITH EXTREME CARE. DO NOT CUT TOWARD ANY PART OF YOUR FINGERS, HAND OR BODY. DO NOT RUN FINGER ALONG EDGE. STORE IN A SAFE MANNER.**
13. Do not use outdoors.
14. Close supervision is necessary when any appliance is used by or near children.
15. Do not use honing oils, water or any other lubricant with the Model 316.
16. For household use only.

17. **SAVE THESE INSTRUCTIONS.**

YOU MADE A GOOD CHOICE

Chef'sChoice® introduces the Asian Knife Sharpener Model 316 in response to requests for a precision means to restore the edges of Japanese and other Asian knives to their original factory sharpness. This new sharpener incorporates highly precise angle control and the Diamond Hone® technology that has made Chef'sChoice® sharpeners the choice of leading chefs worldwide.

You will appreciate how the fine and ultrafine 100% diamond abrasives used in this sharpener delicately hone and polish the very sharp edges characteristic of the thin oriental blades. By following these Instructions you can also, if you wish, convert any of your thinner Euro/American style knives to the Asian edge and enjoy the effortless performance of this lower angle edge. These instructions describe how most Asian knives, including the traditional Japanese blades, can be edged with the Model 316.

You will enjoy how effortlessly you will be able to prepare your favorite sushi, sashimi, and vegetables or to tail, fillet or chop the fresh catch of the day.

ASIAN KNIVES

Asian knives differ from Euro/American style knives in that the most popular Asian blades have a thinner cross section where the edge facets are formed. In addition each cutting edge facet is often set at a smaller angle than the conventional facets on Euro/American blades. The thinner blade behind the edge facets and the smaller angled facets of Asian blades reduce the amount of effort needed to cut or slice. Consequently the Asian edge is somewhat more delicate and may require re-sharpening more often if used for the heavier kitchen chores. Asian type blades are ideal for preparing, slicing and chopping vegetables, for filleting fish and for preparing the popular sushi and sashimi. For more information on the design of Asian knives carefully review the Description of Asian and Euro/American blades, page 9.

UNDERSTANDING THE CHEF'SCHOICE® ASIAN KNIFE SHARPENER

The Chef'sChoice® Model 316 is designed to create a factory sharp Asian edge on all contemporary Japanese style knives, all Chinese style cleavers and the thinner traditional style Japanese blades. Because only fine and ultrafine diamonds are used in this sharpener, it is not designed to sharpen very thick knives such as some of the Deba type knives, thick sporting knives, the heavier European style chef knives, European cleavers and some of the thicker sashimi blades. These thicker knives can be sharpened in other Chef'sChoice® sharpeners such as Models 120 and Commercial 2000.

The Model 316 Asian sharpener has two sharpening stages as shown in Figure 1. The first stage hones each side of the edge at about 15 degrees with a fine diamond abrasive. The second stage polishes the edge to a finer finish at a slightly larger angle using ultrafine diamonds. In both Stage 1 and Stage 2 the left side and right side of the blade are sharpened separately, which allows you to hone and polish the traditional single beveled Japanese blades selectively and primarily on their beveled side.

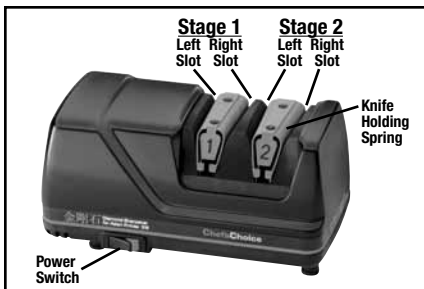


Figure 1. Model 316 Sharpener for Asian knives.

The contemporary Japanese blade and Chinese cleavers should be honed and polished on both sides of the blade. The traditional single bevel Japanese blade, such as the sashimi blade, must be honed and polished primarily on the front side of the blade, which has the very large factory bevel (Bevel A. See page 9).

Please read carefully the following detailed sharpening instructions in order to optimize your results and to avoid any damage to these specialized blades.

Never operate the sharpener from the back side. Use just enough downward pressure when sharpening to ensure uniform and consistent contact of the blade with the abrasive disks on each stroke. Additional pressure is unnecessary and will not speed the sharpening process. Avoid excessive cutting into the plastic enclosure. Accidental cutting into the enclosure will not functionally impact operations of the sharpener or damage the edge.

Try a practice pull through the sharpener before you turn on the power. Slip the knife blade smoothly into the left slot between the left angle guide of Stage 1 and the plastic knife holding spring. Do not twist the knife. Move the blade down in the slot until you feel it contact the diamond disk. Pull it towards you lifting the handle slightly as you approach the tip. This will give you a feel for the spring tension. Remove the knife and read the instructions specific to the type of knife you will be sharpening.

SHARPENING THE CONTEMPORARY ASIAN KNIFE



Before sharpening your contemporary style Asian blade, refer to Description of Asian and Euro/American blades, pages 9 and 10, to confirm that you do in fact have a double faceted blade. All double faceted Asian blades are defined as contemporary blades. Most of the popular Asian blades such as the Usaba (nakiri) and Santoku currently sold in the United States are the double faceted contemporary design. If your double faceted knife is very thin at the edge and it is relatively new it probably will not need to be pre-honed in Stage 1 before polishing. Instead, start in Stage 2, which will polish the edge with ultrafine diamonds. Turn on the power switch and sharpen in Stage 2 as follows:

START BY POLISHING THE EDGE IN STAGE 2

- a. Pull the blade through the left slot of Stage 2 (see Figure 2) and then through the right slot of Stage 2. Make 2 pairs of pulls, alternating each pull in the left and right slots of Stage 2. You should take about 3 seconds for each pull for a 5 inch (12 cm) long blade.
- b. Then make 3 pairs of alternating faster pulls (about 1 second per pull for a 5 inch [12 cm] blade) in Stage 2.

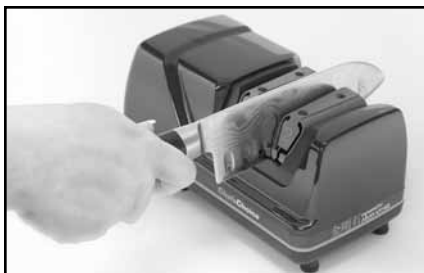


Figure 2. Santoku knife in left slot Stage 2 (double facet Santoku blade).

If the knife is not yet shaving sharp, repeat steps a and b above. Again test the blade for sharpness. In the event the knife still is not sufficiently sharp it will be faster to first pre-hone it in Stage 1 as follows:

USE HONING STAGE 1, WHEN NECESSARY

- a. Pull the blade alternately through the left and right slots (see Figure 3) of Stage 1, making about 3 pair of pulls, taking about 3 seconds for each pull. Check the edge carefully to confirm the presence of a burr (see Figure 4), which will be small since the Stage 1 abrasive is quite fine. To check for the burr, move your forefinger carefully across the edge as shown in Figure 4. (Do not move your finger along the edge—to avoid cutting your finger). If the last pull was in the right slot, the burr would appear only on the right side of the blade (as you normally hold it) and vice versa. The burr, when present, feels like a rough and bent extension of the edge; the opposite side of the edge feels very smooth by comparison. When a burr exists along the entire edge, proceed to polish again in Stage 2.
- b. If there is no burr continue honing in Stage 1, alternating left and right slots until a light burr develops. When a burr is present along the entire blade length proceed as below to polish again in Stage 2.

RETURN TO POLISHING STAGE 2

- a. Make 3 pairs of pulls, alternating pulls in the left and right slots, taking 3 seconds per pull for a 5" blade. Make 3 pairs of faster pulls, alternating left and right slots, taking 1 second per pull. Test the blade for sharpness.
- b. If the edge is not shaving sharp, make a few more pairs of fast pulls in Stage 2 until the edge is shaving sharp.

RE-SHARPENING THE CONTEMPORARY ASIAN BLADE

Re-sharpen by following the procedure above starting with Polishing in Stage 2 as described. You should be able to resharpen to a razor edge 10 or more times using only Stage 2 before finding it necessary to again hone in Stage 1. Hone in Stage 1 only when you find it is taking too long or too many pulls in Stage 2 to bring the edge to razor sharpness. In that event, follow the sharpening sequence described above.



Figure 3. Santoku knife in right slot of Stage 1.

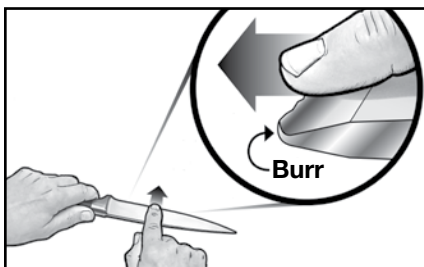


Figure 4. When you create a distinct burr along the blade edge, it can be detected by sliding finger across and away from the edge. Caution! See text.

SHARPENING THE TRADITIONAL (SINGLE BEVEL) JAPANESE BLADE



Traditional Japanese knives are single sided and have a large factory bevel (Bevel A, page 9) on one side of the blade. There are a large number of manufacturers of knives of this type which are used widely to prepare sashimi. The factory bevel (Bevel A) is commonly ground at about 10 degrees, but there are exceptions and that angle is not standardized at the factories. Designs of the traditional Japanese knives and the detailed structure of the cutting edges likewise varies widely from one manufacturer to the next, however there are some similarities. The cutting edge consists of a small primary facet on the front face of the blade and a much smaller secondary microfacet along the back face. Commonly the back side microfacet (Figure 10) can be easily seen only with a hand magnifier. The back face is ground flat at the factory or more commonly it is slightly hollow ground to ensure that an effective microfacet can be formed there as part of the cutting edge. Because of the lack of standardization, commonly the manual approach used to sharpen these knives has proven difficult, laborious and time consuming. The Chef'sChoice® Model 316 Sharpener is designed to sharpen all but the heaviest contemporary and traditional Asian blades and to create a factory-like edge.

Before you start to sharpen a traditional blade, examine it carefully in order to confirm that you have the traditional single bevel blade and to determine whether you have a right or left handed type as described on page 9. It is important that you follow carefully the sharpening procedure and sequence as described below in order to achieve the optimum edge on your traditional blade.

Note: Do not attempt to sharpen any traditional blade thicker than 1/8 inch (3 mm) in the Model 316 sharpener. (Control of the sharpening angle becomes difficult for such thick blades.)

Again confirm which side of the blade has the large factory Bevel A. Hold the blade in your hand (as if you are cutting) and if the large factory bevel is on the right side of the blade, the blade is right handed. For the right handed blades start sharpening in the left slot of Polishing Stage 2 so that only the beveled side (right side) of the edge will contact the polishing wheel.

STEP 1 - START IN POLISHING STAGE 2 (RIGHT HANDED BLADES)

Pull the full length of the blade through the left slot of Stage 2 (Figure 5) about ten (10) times (take about 3 seconds for each pull of a 5 inch (12 cm) blade and proportionally longer for longer blades). Feel for a burr on back side of blade edge as shown in Figure 4. (The burr will be extremely small). If there is no burr, make ten (10) additional slow pulls through the left slot. If no burr is formed after these pulls proceed to Step 2; otherwise omit Step 2 and go to Step 3.

STEP 2 – USING THE HONING STAGE 1 (RIGHT HANDED BLADES)

If you were unable to develop a burr in Stage 2 as described in Step 1 you will need to hone the edge in Stage 1 as follows: Since your traditional blade is right handed you must hone only in the left slot of Stage 1 (see Figure 6). The number of pulls that you need to make depends on how dull your blade is. Duller blades will require more pulls.

Make ten (10) pulls in the left slot of Stage 1 and then check for a burr along the back of the blade. (The burr created in Stage 1 will be small but easily felt as shown in Figure 4). Make certain the burr is present along the entire length of the edge. If there is no burr or only a partial burr, continue to make additional pulls all in the left slot about five (5) at a time and check for a burr after each group of five (5) pulls. Probably 20-30 total pulls in the left slot will be adequate to raise a burr; it is unlikely to take more than 50 left slot pulls to create the burr. When a burr is confirmed, proceed to Step 3.

STEP 3 – FORMING THE FINAL EDGE (RIGHT HANDED BLADE)

- a. Make five (5) regular pulls in the left slot of Stage 2.
- b. Make one (1) regular pull in right slot of Stage 2 to create a small microbevel along the back side of the edge.
- c. Make several pairs of fast pulls (one (1) second each) in Stage 2 alternating in the left and right slots of Stage 2. The fast pulls with ultrafine diamonds polish the facet on the front side of the blade as well as the rear microfacet to create an extremely sharp edge.
- d. Check the blade carefully for sharpness using a thin sheet of paper. The blade should be razor sharp. If not razor sharp repeat 3c. above and retest the blade for sharpness.

RESHARPENING THE TRADITIONAL JAPANESE BLADE (RIGHT HANDED)

In general you will be able to resharpen quickly by making 3 or 4 pairs of fast pulls alternating in the left and right slots of Stage 2. Repeat this if necessary to obtain a razor sharp edge.

When resharpening only in Stage 2 becomes too slow to develop a sharp edge or if the edge has been damaged you will need to re-hone the edge in Stage 1. Use only the left slot of Stage 1. Generally you will find that about five (5) re-honing pulls will be sufficient in Stage 1 to speed the resharpening in Stage 2. After re-honing return to Stage 2 and make several pairs of fast pulls alternating in the left and right slots to develop the final edge.

SHARPENING LEFT HANDED TRADITIONAL BLADES

The procedure you must use with left handed blades is similar to that procedure for right handed blades as detailed above – Except, in all cases the slots you must use are reversed. Where the sharpening procedure for right handed blades calls for use of the left slot, you must use the right slot when sharpening a left-handed blade. Likewise use the left slot where the right handed instructions call for using the right slot.



Figure 5. Traditional (sushi) knife in left slot of Stage 2.



Figure 6. Traditional (sushi) knife in left slot of Stage 1.

HOW TO CREATE THE ASIAN EDGE ON EURO/AMERICAN BLADES



If you have a Euro/American brand knife, it is relatively simple to convert its edge to the low angle Asian double faceted edge. Remember that the advantage of the Asian edge is due to the thinner cross-section of the typical Asian blade where the edge facets are formed, and the smaller angle (about 15°) of each edge facet. If the Euro/American style blade is thick and its thickness at the top of its edge facets is already large, much of the advantage of the Asian edge will not be realized. The blade must be very thin where the facets are honed in order to realize the advantage of the Asian edge. Consequently, consider this change for only your thinnest blades such as a thin utility blade or perhaps a thin paring knife.

To convert from the Euro/American Edge to the Asian Edge, start with the Honing Stage 1 as follows:

START IN HONING STAGE 1

Pull the full length of blade thru the left (Figure 7) and right slots of Stage 1, using the left and right slots on alternate pulls. (Take about 3 seconds for each pull on a 5" long blade). It will take about 20 pair of pulls to fully re-angle the edge of a thin blade. Check for a burr and continue to make more pulls as necessary to create a small burr along the full length of the blade. Then proceed to Stage 2 as follows.

POLISHING IN STAGE 2

- Make about 5 to 7 pairs of pulls through Stage 2 (Figure 8), alternating each pull in the left and right slots (about 3 seconds for each pull on a 5 inch [12 cm] long blade.)
- Then make 4 pairs of fast pulls alternating through the left and right slots. (1 second for each pull for a 5 inch [12 cm] blade.)
- Check the blade for sharpness. For a sharper edge make a few more pairs of fast pulls as in step b and check for sharpness.



Figure 7. European blade in left slot Stage 1.



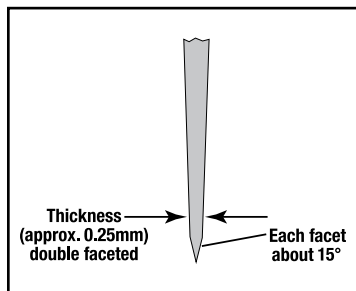
Figure 8. European blade in right slot Stage 2.

RE-SHARPENING THE EURO/AMERICAN BLADE

Re-sharpen in Polishing Stage 2 as described above. You will be able to re-sharpen repetitively about 10 times using only Stage 2 as described above. After resharpener a number of times, you may want to hone in Stage 1 to speed the re-sharpening process. In Stage 1 make about 5 pairs of alternating slow pulls and check for a burr. When a burr exists, proceed to polish in Stage 2 as described above.

DESCRIPTION OF ASIAN AND EURO/AMERICAN BLADES

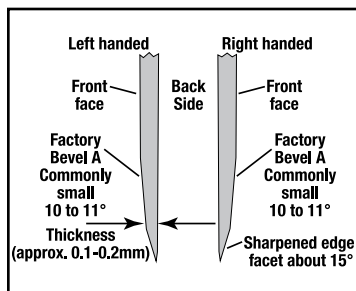
Euro/American blades in general have a sturdier cross-section than the more delicate and thinner contemporary Asian blades. The variation among commercially available knives of any type is great and in fact some Euro/American blades are very thin and certain Asian knives have a thicker cross-section designed for heavier work.



1. CONTEMPORARY ASIAN KNIVES

The more popular Asian blades; the thin, light weight Santoku and Usaba or Nakiri are generally double faceted (sharpened on both faces of the blade) as shown on the left. Occasionally Santoku knives are sold with single facets (#2 below) but these are not readily available in the United States.

There are other but somewhat heavier double-faceted Asian knives, the Deba and Gyutou, popular in Asia, which are used for chopping hard vegetables, for tailing and filleting fish and for meats. These are basically Asian chefs knives designed for heavier duty work. The Chinese cleaver is included in this class.



2. TRADITIONAL JAPANESE KNIVES

The traditional Japanese knife is single beveled and has a wide factory bevel A along one face of the blade above the small edge facet. These are sold as either right handed or left handed versions as shown on the left. The factory bevel A is ground, commonly at about 10 degrees. The most popular example of this type blade is the sashimi knife also called yanagi and sujihiki, designed as shown to the left. This lengthy, slicing blade is ideal for preparing very thin slices of raw tuna or salmon. The back of this blade is commonly slightly hollow ground. A small single cutting facet of about 15° to 20° is created along the front of the edge of the sashimi blade as shown in Figure 10 in order to establish the geometry of the cutting edge. An even smaller cutting micro-facet (barely visible) is customarily created on the back face of the blade to enhance the sharpness of the finished edge. Figure 10 shows a greatly enlarged cross-section view of a typical factory edge on the traditional single-bevel Japanese knife. The large factory bevel A serves to deflect the food slice away from the blade as it is cut.

3. EUROPEAN/AMERICAN BLADES

While most of the Euro/American knives (shown on the left) have a thicker cross-section designed for heavier work, the range of blade thickness in these familiar blades is great and certain of these knives, such as the conventional paring, fillet and utility blades, have a relatively thin cross-section well suited to their intended application. Euro/American blades are universally double beveled (sharpened on both sides of the blade.)

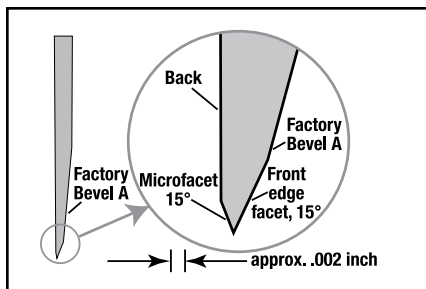
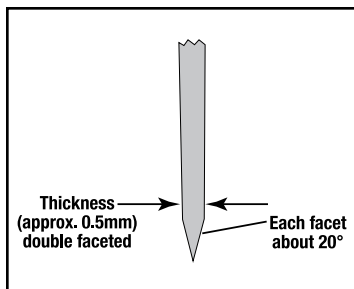


Figure 9. Cross-section of a typical factory traditional Asian knife edge, magnified 50x (right-handed).

SUGGESTIONS

1. Always clean all food, fat and foreign materials from knife before sharpening or resharpening. If soiled, carefully wash the blade before sharpening. (See suggestion #6).
2. Use only light downward pressure when sharpening – just enough to establish secure contact with the abrasive disk.
3. Always pull the blades at the recommended speed and at a constant rate over length of blade. Never interrupt or stop the motion of the blade when in contact with abrasive disks.
4. Carefully follow the detailed procedures for each type blade for best results and to extend the useful life of your knives. The sharpening sequence is especially important with the single sided traditional blades.

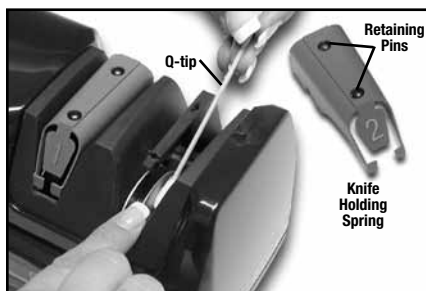


Figure 10. Cleaning the polishing disks.



Figure 11. Removing cover under base to clean out metal dust.

5. The edge of the knife blade, while sharpening, should be held in a level position relative to the top of the counter or table. To sharpen the blade near the tip of a curved blade, lift the handle up slightly as you approach the tip so that each section along the curved length of the edge as it is being sharpened is maintained “level” to the table.
6. You may find it helpful to occasionally clean the ultrafine diamond abrasive disks in Stage 2. The need for this will be evident if the sharpening rate in Stage 2 slows excessively. To clean these disks, unplug the sharpener and then remove the gray plastic knife holding spring marked #2 (See Figure 11). To remove the spring, insert one finger under the rear of the spring and lift with a steady pull. The retainer pins will release and free the spring. Save the pins. Moisten a Q-tip with isopropyl (rubbing) alcohol and hold it against the disk as shown in Figure 11. Rotate the disk by hand, holding the Q-tip against the abrasive surface of each disk for several revolutions. Replace the knife holding spring and pins.
7. To increase your proficiency with the Chef’sChoice® Model 316, learn how to detect a burr along the edge (as described previously on page 5). While you might be able to sharpen well without using this technique, it is the best and fastest way to determine when you have sharpened sufficiently in the preliminary steps. This will help you avoid oversharpening and ensure incredibly sharp edges every time. Cutting a tomato or a piece of paper is a convenient method of checking for finished blade sharpness.
8. Some contemporary Asian knives are dimpled and some contemporary and traditional Asian blades are made of layered Damascus steel. All of these should be sharpened accordingly to these instructions depending on whether the knife style is contemporary (two facets) or traditional.

NORMAL MAINTENANCE

NO lubrication is required for any moving parts, motor, bearings or sharpening surfaces. There is no need for water on abrasives. The exterior of the sharpener may be cleaned by carefully wiping with a soft damp cloth. Do not use detergents or abrasives.

Once a year or so as needed you should remove metal dust that will accumulate inside the sharpener from repeated sharpenings. Remove the small rectangular clean-out cover (Figure 12) that covers an opening on the underside of the sharpener. You will find metal particles adhered to a magnet attached to the inside of that cover. Simply rub off or brush off accumulated filings from the magnet with a paper towel or tooth brush and reinsert the cover in the opening. If larger amounts of metal dust have been created you can shake out any remaining dust through the bottom opening when the cover is removed. After cleaning, replace the cover securely with its magnet in place.

SERVICE

In the event post-warranty service is needed, return your sharpener to the EdgeCraft factory where the cost of repair can be estimated before the repair is undertaken. Outside the USA, contact your retailer or national distributor.

Please include your return address, daytime telephone number and a brief description of the problem or damage on a separate sheet inside the box. Retain a shipping receipt as evidence of shipment and as your protection against loss in shipment.



EdgeCraft Corporation
825 Southwood Road
Avondale, PA 19311

Customer Service (800) 342-3255 or (610) 268-0500

Assembled in the U.S.A.

www.chefschoice.com

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Conforms to UL Std. 982

Certified to CAN/CSA Std. C22.2 No.64

Certified to EN 60335-1, EN60335-2, EN55014-1+Ai, EN 61000-3-2, EN61000-3-3

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