

ADJUSTING THE GRINDING RING HEIGHT

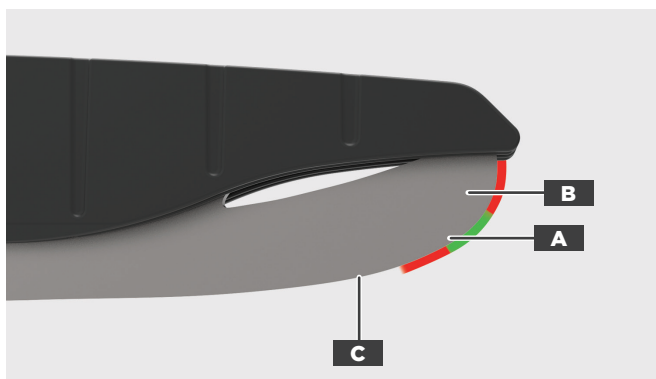
▶ To watch the How-To video, visit sparxhockey.com/howto



For every pair of skates sharpened, you must assess the height of the Grinding Ring and adjust if necessary.

We will first introduce a few new concepts, and then move into the actual adjustment. We want to define an intersection zone, where the vertical face of the blade (B) meets the nearly horizontal face of the blade (C).

This zone can be a curved section of blade (A) like that shown in the figure below or in some cases, it can be a point where surfaces (B) and (C) meet.



When the intersection zone is a curved surface (A as shown above) the **Grinding Ring** can safely initially contact the blade anywhere in this region (A).

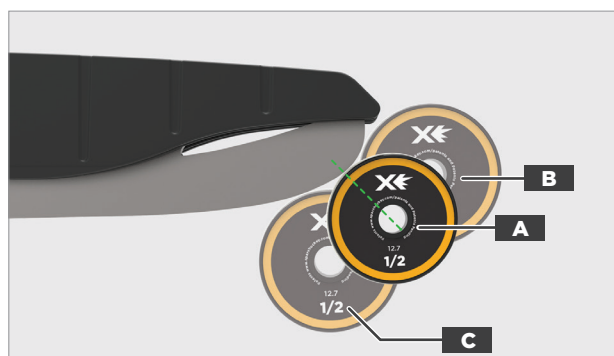
When the intersection zone is a point, which is more common with skates that have been sharpened multiples times, the first contact between the **Grinding Ring** and the blade should be just below the point.

1 INITIATE MOVE MODE

Press the  **Move Button** on the **Keypad**. This will set the **Grinding Ring** into **Move Mode** and allow you to control its movement.

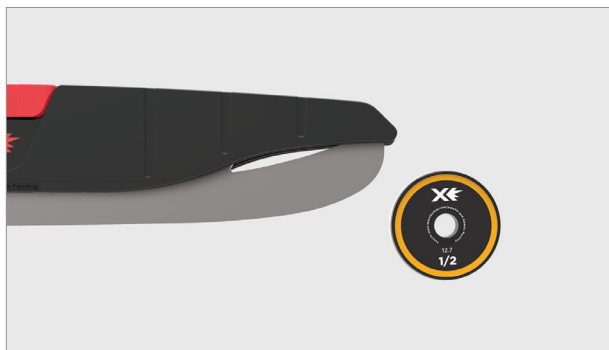
2 INSPECT THE CONTACT POINT

Use the  **Left Buttons** and  **Right Buttons** to touch the **Grinding Ring** to the skate blade. Inspect its contact point and be sure it is in the desired position. In the graphic below you will see an example of a contact point that correctly set (A), too high (B), and too low (C). Another way to help visualize the correct contact point would be drawing an imaginary line (green dashed line in the example below) from the center of the **Grinding Ring** to the initial contact point, the line should be at a 45 degree angle. If the **Grinding Ring** is not in a desired position, follow step 3. If the **Grinding Ring** is in a desired position, skip to step 6.



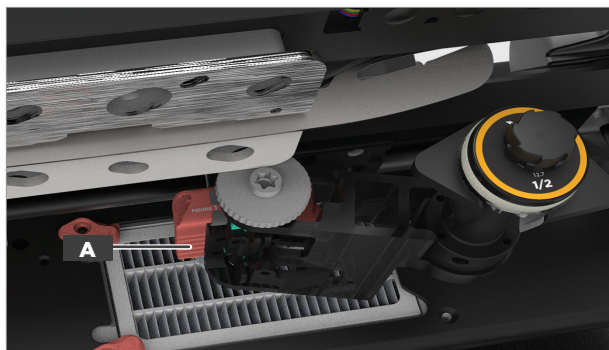
3 MOVE THE CARRIAGE INTO POSITION

Using the ◀ **Left** and ▶ **Right Buttons** on the **Keypad**, back the **Grinding Ring** off the toe of the skate blade 1/4 inch.



4 ADJUST THE GRINDING RING HEIGHT

Lift the **Head Unit**. Locate the red 🔴 **Height Adjustment Knob** (A). Turn the knob left to raise the height or right to lower the height until the **Grinding Ring** is at the desired height. The knob is labeled 1-8, with 8 being the highest setting for the **Grinding Ring** and 1 being the lowest setting.



5 INSPECT THE CONTACT POINT

Using the ◀ **Left** and ▶ **Right Buttons**, touch the **Grinding Ring** to the skate blade. Inspect its contact point and be sure it is in its desired position. Repeat steps 4 and 5 until the **Grinding Ring** makes contact at the desired position.

6 END MOVE MODE

Press the ➡ **Move Button** again to send the **Grinding Ring** back to its home position.

SELECTING THE NUMBER OF CYCLES

When the sharpener moves the **Grinding Ring** out and back over the skate blade once, it is called a cycle.

The Sparx™ Sharpener comes set automatically to a standard ④ four cycles with all standard Radius Ring™ and FIRE Ring™ **Grinding Rings**. We recommend trying four cycles to start and moving higher or lower as needed. Typically, we have found that four cycles will handle normal wear and tear (and even small nicks) from one to four hours of skating between sharpenings. For brand-new steel or when changing **Grinding Ring** hollow depths, we recommend using the ⑩ 10-cycle setting to ensure you completely reset the skating surface of the blade. See Sharpening New Steel at the end of the Operation section.

1 ADJUST THE CYCLE COUNT

Use the ◀ **Left** and ▶ **Right Buttons** (A) on the **Keypad** to adjust the number of cycles desired. The number of cycles selected will be illuminated on the **Cycle Counter** (B).



SHARPENING SKATES

Once you have loaded the skate, closed the **Slot Covers**, and adjusted the height of the **Grinding Ring**, you are ready to begin sharpening.

To cancel the cycles at any point during the sharpening, press the **Cancel Button** once. This will send the **Carriage** back to its home position at the end of its current pass.

1 BEGIN SHARPENING

Press the **Play Button**. Once the button has been pressed, it will change from white to blue and the sharpening process will begin.

Upon pressing the **Play Button**, the **Air Filter** fan and grinding motor will turn on. The **Cycle Counter** will flash with the current cycle number until that cycle (out and in) is completed. The sharpener will continue to run until all cycles have been performed.

At the completion of the final cycle, the end of sharpening is marked by a "cycle complete" tone and the case LEDs will turn green. The fan will continue to run for an additional 30 seconds after the final cycle completes.

ADDITIONAL CYCLES

If additional cycles are desired, you can reset the cycle count and press the **Play Button** again.



If the **Grinding Ring** skips when it first makes contact with the blade, the **Grinding Ring's** height is too high. When properly set, the **Grinding Ring** should make a smooth transition onto the skate blade.

UNLOADING A SKATE

1 DISENGAGE SLOT COVERS

Move both **Slot Covers** (A) away from the skate.



2 REMOVE THE SKATE

Press and hold down the **Clamp Lever** to open the **Skate Clamp**. Remove the skate from the **Skate Clamp** and release the **Clamp Lever**.



EDGE DEBURRING

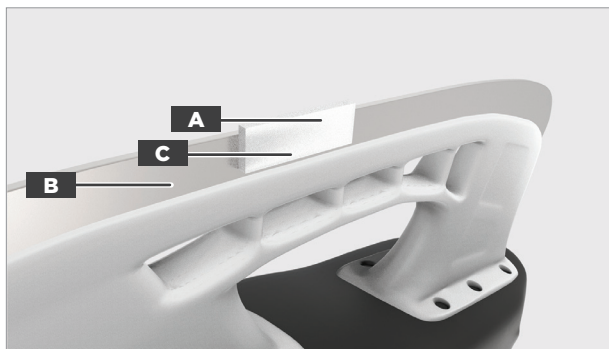
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We recommend using protective gloves when deburring the skate blade.

1 DEBURR THE BLADE WITH THE STONE

Press the **Honing Stone** (A) against the face of the skate blade (B). Do not put pressure on the side of the stone closest to the blade edge. With light pressure, press down on the lower side of the stone (C) and slowly run the stone back and forth along the length of the blade for four full passes.

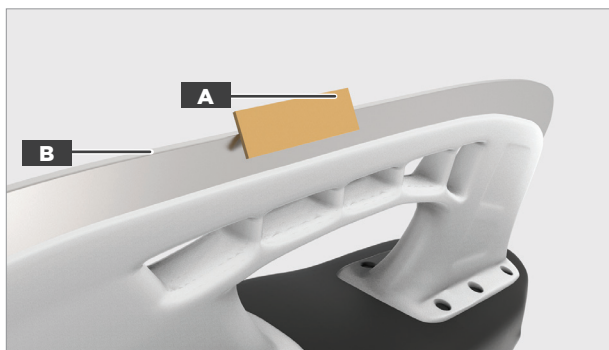


2 REPEAT ON THE OPPOSITE SIDE

Turn the skate over. Repeat step 1 on the opposite side of the blade.

3 DEBURR THE BLADE WITH THE STROP

Press the **Leather Strop** (A) against the edge of the skate blade (B) at a 45 degree angle. With light pressure, slowly run the strop back and forth along the length of the edge for four full passes



4 REPEAT ON THE OPPOSITE SIDE

Turn the skate over. Repeat step 3 on the opposite edge of the blade.



When deburring coated steel, make sure to only use the **Leather Strop** or the **Coated Steel Kit** (sold separately) to ensure you do not remove or damage the coating.

POWERING OFF

1 LOCATE THE POWER INPUT PORT

On the side of the sharpener, locate the **Power Input Port**.

2 TURN OFF THE SHARPENER

Toggle the **Power Input Port** switch to the off position (I=on, O=off).

GOALIE SKATES

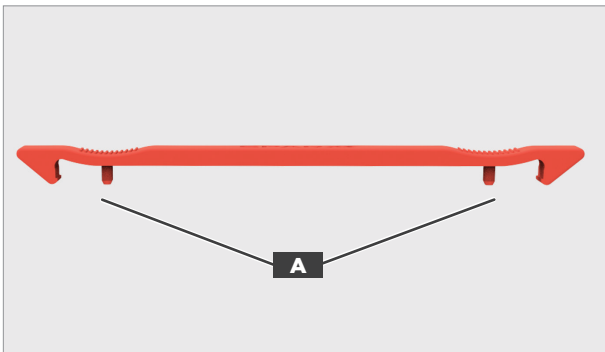
📺 To watch the How-To video, visit sparxhockey.com/howto

Goalie risers are necessary if your skate has a cowling. Goalie skates without a cowling you may sharpen normally without risers.

If your skate does have a cowling, follow the steps below.

1 INSTALL THE GOALIE RISERS

Align the **Anchor Pins (A)** of the **Goalie Risers** to the **Anchor Slots** of the **Skate Clamp**. Once aligned, press down firmly until you feel the **Goalie Risers** snap into place.

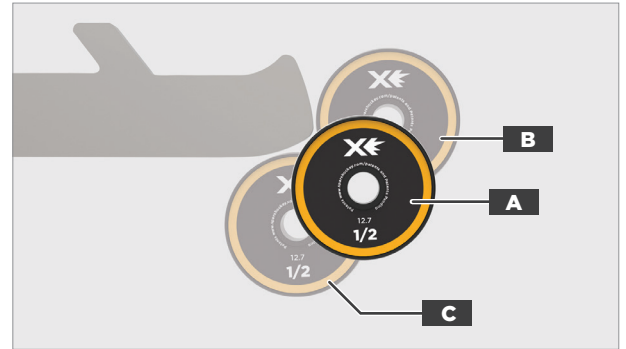


2 CONTINUE THE SHARPENING PROCESS

Refer to "Loading a Skate" in the Operation section of the manual. When adjusting the **Grinding Ring Height**, refer the graphic in step 3.

3 ADJUST THE GRINDING RING HEIGHT

Refer to "Adjusting the Grinding Ring Height" in the Operation section of the manual using the figure below as your guide where the desired contact point is A, contact point B is too high and contact point C is too low.



5 CONTINUE THE SHARPENING PROCESS

Refer to "Sharpening Skates" in the Operation section of the manual.

6 REMOVE THE GOALIE RISERS

Pull up on each end of the **Goalie Risers** to remove from the **Skate Clamp**.



FIGURE SKATES

📺 To watch the How-To video, visit sparxhockey.com/howto

** Figure Skate Adapters are sold separately.*

Before loading a figure skate, **Figure Skate Adapters** must be installed onto each end of the skate steel as shown below.

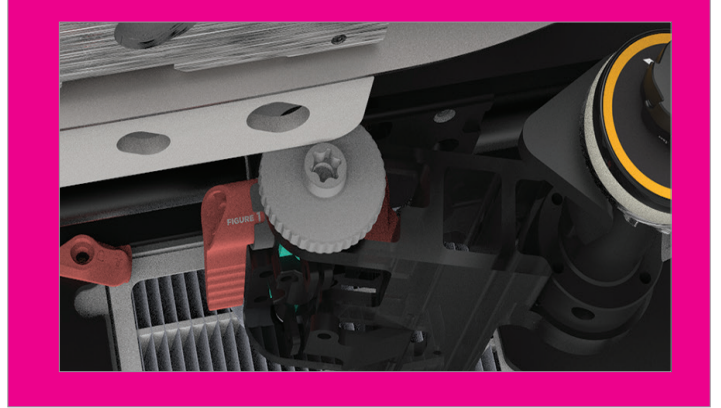
1 PLACE ADAPTER OVER TAIL AND TOE PICK

Using the included wrench tighten the set screw until finger tight do not over tighten, the adapter should still be able to pivot. Be sure to keep the drag pick covered. After both adapters are installed perform a visual to check to ensure that both adapters are on a level horizontal plane.



2 ADJUST THE GRINDING RING HEIGHT

Set the grinding ring height setting to **Figure (1)**. Look for the contact point at which the grinding ring starts to roll on the skate using the move button. If the contact point is leaving some of the skate blade untouched you may need to adjust the adapter slightly higher.



3 INSERT SKATE INTO SKATE CLAMP

We recommend having the toe pointing right. Ensure that the adapters are sitting flush with the top surface of the sharpener.



4 CONTINUE THE SHARPENING PROCESS

Refer to "Sharpening Skates" in the Operation section of the manual.

SHARPENING NEW STEEL

▶ To watch the How-To video, visit sparxhockey.com/howto



Before loading new steel, take a dark colored marker and fill in three strips (1 inch in length the full width of the blade) on the toe, heel, and middle of the bottom surface of the skate blade. To ensure you have sharpened the entire blade, inspect the blade after running the cycles and if the sharpening is complete, all of the marker on the skating surface will be removed.

1 LOAD THE SKATE

After applying the marker (A in the below example), follow the instructions in "Loading a Skate" in the Operation section of this manual.

2 ADJUST GRINDING RING HEIGHT

Follow the instructions in "Adjust the Grinding Ring Height" in the Operation section of this manual.

3 SELECT 10 CYCLES

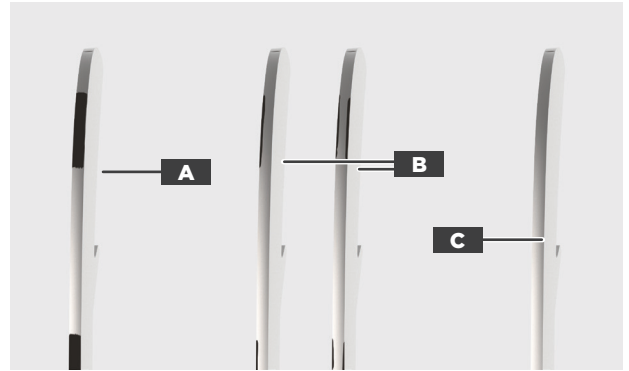
Using the ◀ **Left** and ▶ **Right Buttons**, select 10 on the **Cycle Counter**.

4 CONTINUE THE SHARPENING PROCESS

Refer to the Operation section of the manual.

5 INSPECT BLADE SURFACE

If the marker is gone (C in the example below), you have successfully set your edges. If there is still marker left on the blade (B), continue running cycles until it is completely gone. Due to variations in blade thickness, steel quality, and edge height difference, some new steel may require fewer than 10 cycles, and some more.



TROUBLESHOOTING

ERROR TYPES

There are two types of errors encountered by the Sparx Skate Sharpener that can interrupt operation. These types are: Function Entry errors and System Stop errors. Each error type is described in the table below along with information about how the user is informed of the error.

ERROR TYPE	DESCRIPTION	DISPLAY METHOD
I: Function Entry	Errors that prevent the user from entering into a function (e.g. sharpening or alignment).	Displayed through the user interface. Temporarily displayed on the Cycle Counter . Not saved to Error History.
II: System Stop	Errors that cause the sharpener to exit out of a function because of safety concerns or to prevent sharpener damage.	Displayed on the Cycle Counter . All functionality is disabled until the user acknowledges the error by pressing the ⏏ Cancel Button . Saved to Error History.

USER INTERFACE PROMPTS

If you are attempting to sharpen a skate, go into **Alignment Mode**, or go into **Move Mode**, but the sharpener is not allowing it, the sharpener will temporarily display an interface prompt, show an error code, and sound an "error" tone.

The most common Interface prompts are listed in the table for interface prompts below. If the user interface prompt is unclear or only an error code is displaying, refer to the Error Code table on the next page.

ACTION	CAUSE	CORRECTIVE ACTION
 Air Filter Button is illuminated red.	Air Filter is either not installed or requires attention.	Install Air Filter . Press and hold button for two seconds until two beeps sound to reset the Air Filter's life.
Grinding Ring Life Indicator circle is blinking red/white.	Grinding Ring has insufficient life remaining for selected sharpening operation.	Sharpener will reset Cycle Count to maximum available cycles, run sharpener with the new value or lower.
Grinding Ring Life Indicator circle is blinking red.	Grinding Ring not found. / Grinding Ring empty.	Install a valid Grinding Ring .

In the event that an error cannot be resolved, please contact customer support at Sparx Hockey.

SPARX HOCKEY CUSTOMER SUPPORT

help@sparxhockey.com

SPARX

ERROR CODES

1 2 3 ④ 5 6 10

For all errors, an error code is displayed on the **Cycle Counter** (1-2-4 is being displayed in the figure above), these error codes will either be permanently or temporarily displayed. If an error code was temporarily displayed and you want to see it again, retrying the action without fixing the underlying cause will display the error. Permanent error codes require the user to acknowledge the error before the error will be resolved and operation can continue. Permanent Error Codes will also be stored in the Error History (discussed below). The troubleshooting table below suggests corrective actions to resolve the error.

If the user wishes to cycle through previous permanent Error Codes, hold down the **⌂ Cancel Button** for 2 seconds until a tone is heard (button initially emits an “error” tone when pressed). Once the beep is heard, the most recent Error Code is displayed. Pressing the **⬅ Left** and **➡ Right Buttons** will cycle through previous Error Codes.

ERROR CODE	CAUSE	CORRECTIVE ACTION
1 - 2 - 10	Air Filter missing.	Install Air Filter .
1 - 3 - 10	Attempted to start Alignment Mode with skate or Grinding Ring installed.	Remove skate and install Alignment Ring .
1 - 4 - 5	Pressed the ▶ Play Button in Alignment Mode .	Exit Alignment Mode by pressing the ⌂ Alignment Button or ⌂ Cancel Button prior to pressing the ▶ Play button.
1 - 4 - 6	Pressed the ▶ Play Button in Move Mode .	Exit Move Mode by pressing the ⏮ Move Button or ⌂ Cancel Button prior to pressing the ▶ Play button.
2 - 3 - 6	Sharpener failed to detect skate.	Ensure that skate is installed in the Skate Clamp correctly and the Grinding Ring height is adjusted properly.
2 - 4 - 6	Grinding Ring has insufficient life remaining for selected sharpening operation.	Sharpener will reset Cycle Count to maximum available cycles. Run sharpener with the new value or lower.
2 - 4 - 10	Grinding Ring empty.	Install a valid Grinding Ring .
2 - 5 - 6	Grinding Ring not found.	Install a valid Grinding Ring .
2 - 5 - 10	Grinding Ring read incomplete.	Repeat process and allow extra time between steps. If this does not resolve the problem, replace the Grinding Ring .
2 - 6 - 10	Grinding Ring read error.	Install a valid Grinding Ring .
3 - 5 - 10	Grinding motor overcurrent.	Confirm that the Grinding Ring height is adjusted properly and nothing is obstructing the Grinding Ring .
3 - 4 - 10	Hardware Fault Circuitry failure.	Call Customer Support at 1-855-SPARX HQ (1-800-772-7947).
3 - 6 - 10	Translation Error - Limit undetected.	Confirm that the Carriage is not obstructed.
4 - 5 - 10	File System Incompatibility	The installed Grinding Ring is not compatible with the skate sharpener. Install a valid Grinding Ring.

6

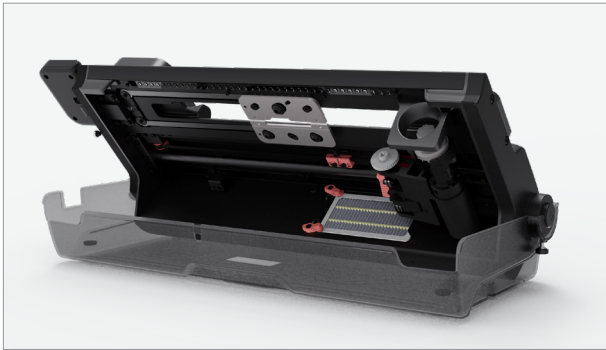
MAINTENANCE

REMOVING THE HEAD UNIT

📺 To watch the How-To video, visit sparxhockey.com/howto

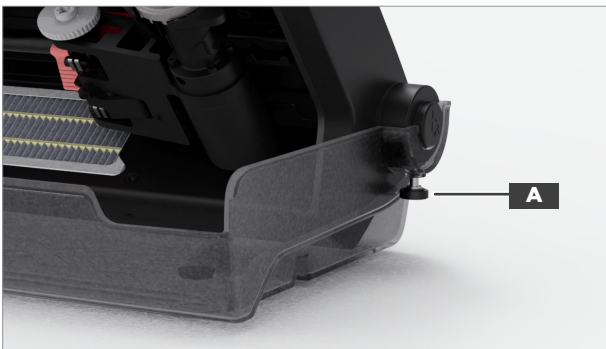
1 LIFT THE HEAD UNIT

Slide the **Triggers** down and lift **Head Unit** to the furthest open position.



2 REMOVE HEAD UNIT THUMB SCREWS

Locate the two thumb screws (A), one located on each side of the sharpener. Unscrew the thumb screws and lift the **Head Unit** straight up.



3 SEPARATE HEAD UNIT FROM THE SHARPENER BASE

Firmly grasp the **Head Unit** with two hands and lift it out of the **Sharpener Base**. Gently place the **Head Unit** down onto a clear surface.

4 REPLACE HEAD UNIT

Place the **Head Unit** back onto the **Sharpener Base**, maintaining the same angled position the **Head Unit** was in when it was removed. Screw the two thumb screws back into the hinges.





There are no user-repairable parts in the Sparx Skate Sharpener. Refer to “Exclusions” in the Warranty section for more information. Maintenance of the Sparx Skate Sharpener is limited to the procedures outlined in this section.

REMOVING AND EMPTYING THE SHARPENER BASE

📺 To watch the How-To video, visit sparxhockey.com/howto

Maintenance Frequency: Perform the following steps after every $\frac{1}{2}$ **Grinding Ring of sharpener use** (160 cycles on the Radius Ring™ and the FIRE Ring™) and before moving and/or traveling with the sharpener.

1 REMOVE AND EMPTY THE SHARPENER BASE

Remove the **Head Unit** from the top of the **Sharpener Base**. To empty **Sharpener Base**—wipe completely clean with a damp cloth (water).

⚠️ *Do not use any solvents or cleaning chemicals in and around the **Skate Sharpener**.*



2 VACUUM SHARPENER

Without removing the **Air Filter**, thoroughly vacuum the top, sides, and around the **Air Filter Housing**. We recommend using a HEPA certified vacuum.

3 CLOSE THE HEAD UNIT

Install the Head Unit back onto the top of the Sharpener.

REPLACING THE AIR FILTER

To order a replacement **Air Filter**, visit sparxhockey.com/filter.

📺 To watch the How-To video, visit sparxhockey.com/howto

Standard Grinding Ring Use (Radius Rings™ and FIRE Rings™): The **Air Filter** should be replaced every 4 **Grinding Rings** (1,280 cycles).

Maintenance Frequency: The **Air Filter** replacement limits listed above are related to the type of **Grinding Rings** being used and refer to the maximum amount of usage that an **Air Filter** should have when using a specific type of **Grinding Ring**.

The 🟡 **Air Filter Button** will light up to remind you to replace the **Air Filter** at the Standard **Grinding Ring** Use interval ONLY

1 ENTER FILTER REPLACEMENT MODE

Power the sharpener on and click the 🟡 **Air Filter Button**. The carriage will reposition itself away from the **Air Filter**.

2 OPEN HEAD UNIT AND CLEAN BASE

Open the **Head Unit**. To empty **Sharpener Base**—wipe completely clean with a damp cloth (water).

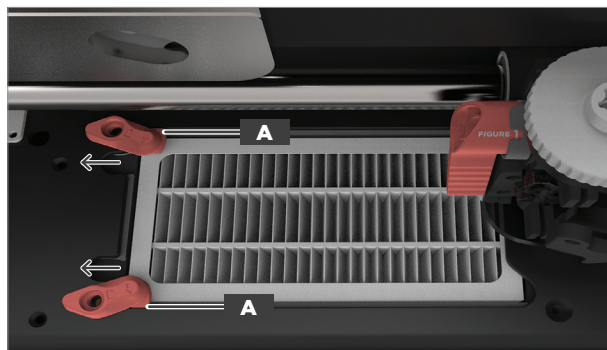
⚠️ *Do not use any solvents or cleaning chemicals in and around the **Skate Sharpener**.*

3 VACUUM SHARPENER

Before removing the **Air Filter**, thoroughly vacuum the top, sides, and around the **Air Filter Housing**. We recommend using a HEPA certified vacuum.

4 REMOVE THE OLD FILTER

Pivot the **Filter Clamps (A)** so that they are no longer holding the **Air Filter** in place.



Pull up on the **Air Filter Pull-Tab** to lift the filter out of the sharpener.

5 INSERT THE NEW AIR FILTER

Vacuum any remaining dust from the **Filter Housing** area. Insert the new **Air Filter** with the pull-tab on the left-hand side and black seal going into the sharpener. Once inserted, pivot the **Filter Clamps** into their original positions.

6 RESET THE AIR FILTER BUTTON

Once your filter has been replaced, hold down the **Air Filter Button** for two seconds until an audible tone is heard to reset the system and extinguish the **Air Filter Button**.

TRAVELING WITH THE SHARPENER

To watch the How-To video, visit sparxhockey.com/howto

1 EMPTY THE SHARPENER BASE

Lift the **Head Unit** and wipe the **Sharpener Base**. To empty **Sharpener Base**—wipe completely clean with a damp cloth (water).

! Do not use any solvents or cleaning chemicals in and around the **Skate Sharpener**.



2 VACUUM SHARPENER

Without removing the **Air Filter**, vacuum the top of and around the **Air Filter Housing**. We recommend using a HEPA certified vacuum.

3 INSTALL THE TRAVEL GUARD

Open the **Skate Clamp** by pressing and holding down the **Clamp Lever**. Install the **Travel Guard** by placing the claw of the **Travel Guard** behind the **Grinding Ring Arbor's** impeller as

shown below. Release the **Clamp Lever**. Ensure that the middle section of the **Travel Guard** is held securely in the **Skate Clamp**.



4 REMOVE THE CLAMP LEVER

Slide the **Clamp Lever** (A) off of the **Lever Dock**.



5 TRAVEL WITH THE SPARX TRAVEL CASE

For the highest level of protection and safety when traveling with your Sparx Skate Sharpener and accessories, we recommend using the Sparx Travel Case (sold separately).



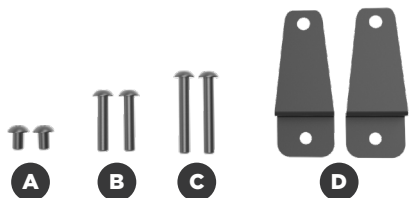
When setting up the Sparx Sharpener after travel, wipe down the **Grinding Ring Arbor's** face and threaded arbor to remove any unwanted steel shavings that may have gathered during transit. This will ensure a proper fit between the **Grinding Ring Arbor** and the **Grinding Ring**.

INSTALLING THE SPARX SHARPENER BASE PRO

📺 To watch the How-To video, visit sparxhockey.com/howto

* Sparx Sharpener Base Pro is sold separately.

WHAT'S INCLUDED



- Torx T25 Wrench

For removing screws from the **Head Unit**

- 3mm Hex Wrench

For installing the new screws into the **Sparx Sharpener Base Pro**

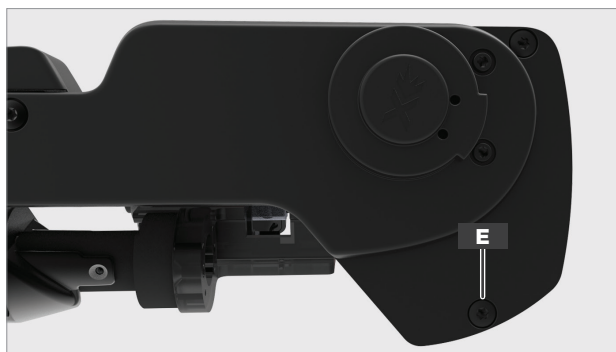
1 REMOVE THE HEAD UNIT

Lift the **Head Unit** into the upright position, unscrew the Thumb Nuts on the side of the Sharpener Head and separate the Head Unit from the Sharpener Base.



2 REMOVE SCREWS FROM HEAD UNIT

With the included Torx T25 wrench, uninstall the **Screw (E)** located on the back of the **Sharpener Head Unit**. Repeat on the other side.



Locate the **Screw (F)** on the front of the **Sharpener Head Unit** and uninstall with the included Torx T25 Wrench. Repeat on the other side.



3 PLACE HEAD UNIT ON BASE

Gently place the **Sharpener Head Unit** down on to the top of the **Sparx Sharpener Base Pro**.



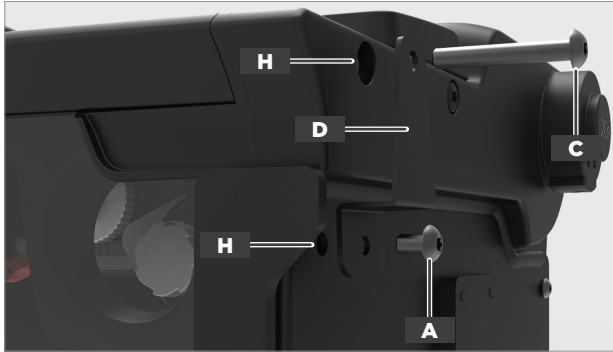
4 INSTALL SCREW

Locate **Screw (B)** and install into the **slot (G)** on each side of the back of the **Sparx Sharpener Base Pro**, securing the **Base** to the **Sharpener Head Unit**. Repeat on the other side.



5 INSTALL BRACKETS

Locate one of each screw, **(A)** and **(C)**, and a **Bracket (D)**. Line up the **Bracket** with the slots on the **Head Unit (H)** and install **Screw (C)** into the top slot and **Screw (A)** into the bottom slot. Repeat on the other side.



After uninstalling the **Head Unit Screws**, as well as the **Thumb Nuts** from the previous step, place them in a safe, secure location as you will need them to transition from the **Sparx Sharpener Pro** back to the **Sparx Sharpener**.

7 WARRANTY

ANY PURCHASE OF A SPARX HOCKEY PRODUCT IS COVERED
UNDER THE ASSOCIATED PRODUCT WARRANTY POSTED AT

SPARXHOCKEY.COM/WARRANTIES

FROM THE DATE OF SHIPMENT OF THE
SPARX HOCKEY PRODUCT.

VELASA SPORTS MAY AT ANY TIME AND IN IT'S SOLE
DISCRETION, MODIFY ANY OF THE TERMS AND CONDITIONS
CONTAINED IN THE WARRANTY POLICY.

