



**SPARX**  <sup>TM</sup>

**OPERATING MANUAL**

**ES100 SKATE SHARPENER**




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# 1

# SAFETY

## SAFETY PRECAUTIONS

1. Before operating the Sparx™ Skate Sharpener, you should familiarize yourself with the product and read and understand all applicable instructions and warnings in this manual.
2. Use personal protective equipment. Always wear eye protection and a dust mask while operating the sharpener.
3. For emergencies: press the  **Cancel Button** two times. This will stop the **Grinding Ring** in its place. Do not stop the **Grinding Ring** unless it is an emergency, as this may damage the skate blade.
4. We do not recommend that children under 13 years of age be permitted to use the Sparx™ Skate Sharpener.
5. The Sparx™ Skate Sharpener is not intended for use by persons (including children 13 years and over) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the Skate Sharpener by a qualified adult.
6. Children should be supervised to ensure that they do not play with the Sparx™ Skate Sharpener.
7. The Sparx™ Skate Sharpener may only be used for sharpening skates.
8. Only Sparx™ **Grinding Rings** may be used with this machine.
9. Set up the product securely on a stable surface and in a protected location. It must be placed where no one can step on or trip over the **Power Cord** and where the **Power Cord** cannot be damaged.
10. Always use the Sparx™ Skate Sharpener in a dry, well-lit and non-condensing environment. To avoid the risk of electric shock, do not use the Sparx™ Skate Sharpener in wet or damp conditions.
11. To avoid injury, always use caution when operating the Sparx™ Skate Sharpener or when changing the **Grinding Ring**.
12. Do not attempt to touch the **Grinding Ring**, **Carriage**, or **Skate Clamp** while the **Grinding Ring** is moving. Wait for the **Carriage** and **Grinding Ring** to come to a complete stop before attempting any adjustments or **Grinding Ring** replacement.
13. Make sure that the **Thumb Nut** is tightened down onto the **Grinding Ring** before starting any grinding operation
14. Do not leave the Sparx™ Skate Sharpener running unattended.
15. Never disconnect the **Power Cord** by pulling the wire to disconnect it from the socket.
16. Store the Sparx™ Skate Sharpener in a dry place, out of the reach of children.
17. Maintain the sharpener according to the Maintenance section of this manual. Emptying the **Dust Tray** and Replacing the **Air Filter**, at specified intervals, are necessary steps for performance and safety.
18. If at any time the product does not operate normally, see the Troubleshooting section of this manual.
19. There are no user-serviceable parts on the sharpener. The sharpener should only be repaired by a professional Sparx™ Hockey technician, using only original spare parts. Unauthorized repairs could lead to hazardous conditions for the user and/or void the warranty.
20. For any further questions about the sharpener, please contact Sparx™ Hockey Support at 1-855-SPARXHQ (1-855-772-7947) or by email at [help@sparxhockey.com](mailto:help@sparxhockey.com).



Warning: Please see the manual for operating instructions.



Caution: Pinch point hazard. Keep hands, hair and other body parts clear of the **Skate Clamp** area.

## **FCC NOTICE (FOR U.S. CUSTOMERS)**

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This device complies with Part 15 of the FCC Rules:

Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

Changes and Modifications not expressly approved by Velasa Sports, Inc. can void your authority to operate this equipment under Federal Communications Commissions rules.

## **INDUSTRY CANADA COMPLIANCE**

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This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

# 1

# SÉCURITÉ

## CONSIGNES DE SÉCURITÉ

1. Avant d'utiliser l'affûteuse de patins Sparx<sup>MC</sup>, vous devez vous familiariser avec le produit et lire et comprendre toutes les instructions et mises en garde dans ce manuel.
2. Portez un équipement de protection individuelle. Portez toujours des lunettes de sécurité et un masque anti-poussières lorsque vous utilisez l'affûteuse de patins.
3. En cas d'urgence : appuyez deux fois de suite sur le bouton  Annuler (Cancel). Ceci immobilise immédiatement la meule d'affûtage. N'arrêtez la meule d'affûtage qu'en cas d'urgence, car cela pourrait endommager la lame du patin.
4. Il n'est pas recommandé que les enfants de moins de 13 ans soient autorisés à utiliser l'affûteuse de patins Sparx<sup>MC</sup>.
5. L'affûteuse de patins Sparx<sup>MC</sup> ne doit pas être utilisée par des personnes (y compris des enfants de 13 ans et plus) ayant des capacités physiques, sensorielles ou mentales réduites, ou un manque d'expérience et de connaissances, à moins qu'elles soient surveillées ou qu'elles aient reçu une bonne formation sur l'utilisation de l'affûteuse par un adulte compétent.
6. Les enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec l'affûteuse de patins Sparx<sup>MC</sup>.
7. L'affûteuse de patins Sparx<sup>MC</sup> doit être utilisée exclusivement pour l'affûtage de patins.
8. La machine doit être utilisée exclusivement avec des meules d'affûtage Sparx<sup>MC</sup>.
9. Pour assurer la sécurité de tout le monde, installez la machine sur une surface stable et dans un endroit protégé. Elle doit être placée dans un endroit où il n'y a aucun risque que quelqu'un puisse marcher ou trébucher sur le cordon d'alimentation ou le cordon d'alimentation puisse être endommagé.
10. Utilisez l'affûteuse de patins Sparx<sup>MC</sup> toujours dans un environnement sec, bien éclairé, et sans condensation. Pour éviter tout risque de décharge électrique, n'utilisez jamais l'affûteuse de patins Sparx<sup>MC</sup> dans des conditions humides ou mouillées.
11. Pour éviter les blessures, soyez toujours prudent lors de l'utilisation de l'affûteuse de patins Sparx<sup>MC</sup>, ou lors du remplacement de la meule d'affûtage.
12. N'essayez pas de toucher la meule d'affûtage, le guide-meule mobile ou la pince de serrage pendant la rotation et le mouvement de la meule. Attendez l'arrêt complet du guide-meule et de la meule d'affûtage avant de tenter un réglage ou le remplacement de la meule.
13. Assurez-vous que l'écrou à ailettes est serré sur la meule d'affûtage avant de commencer l'affûtage.
14. Ne laissez jamais l'affûteuse de patins Sparx<sup>MC</sup> sans surveillance pendant qu'elle est en marche.
15. Ne débranchez jamais le cordon d'alimentation en tirant sur le cordon.
16. Rangez l'affûteuse de patins Sparx<sup>MC</sup> dans un endroit sec, hors de la portée des enfants.
17. Faites l'entretien de l'affûteuse selon les consignes de ce manuel. Le vidage du bac à poussière et le remplacement du filtre à air, à des intervalles déterminés, sont des étapes nécessaires à la performance et à la sécurité.
18. Si, à tout moment, la machine cesse de fonctionner normalement, consultez la section Diagnostic des pannes de ce manuel.
19. L'affûteuse ne comporte aucune pièce réparable par l'utilisateur. Elle ne doit être réparée que par un technicien professionnel Sparx<sup>MC</sup> Hockey, exclusivement avec des pièces de rechange d'origine. Les réparations non autorisées pourraient créer des conditions dangereuses pour l'utilisateur ou annuler la garantie.
20. Pour toute question au sujet de l'affûteuse, veuillez communiquer avec le service technique de Sparx<sup>MC</sup> Hockey au (855-772-7947) ou par courriel à [help@sparxhockey.com](mailto:help@sparxhockey.com).



Mise en garde : Veuillez consulter les instructions dans le manuel.



Attention : Danger de pincement. Gardez les mains, les cheveux et d'autres parties du corps à l'écart de la zone de la pince de serrage.

## **CONFORMITÉ AUX NORMES D'INDUSTRIE CANADA**

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Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



## 2

# INTRODUCTION

## TECHNICAL SPECIFICATIONS

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### SKATE COMPATIBILITY

Hockey Skates

Goalie Skates

Figure Skates\*

*\*Requires an additional adapter, which is sold separately.*

### DIMENSIONS AND WEIGHT

Width: 26.8 Inches / 680 mm

Height: 7.6 Inches / 194 mm

Depth: 15.5 Inches / 390 mm

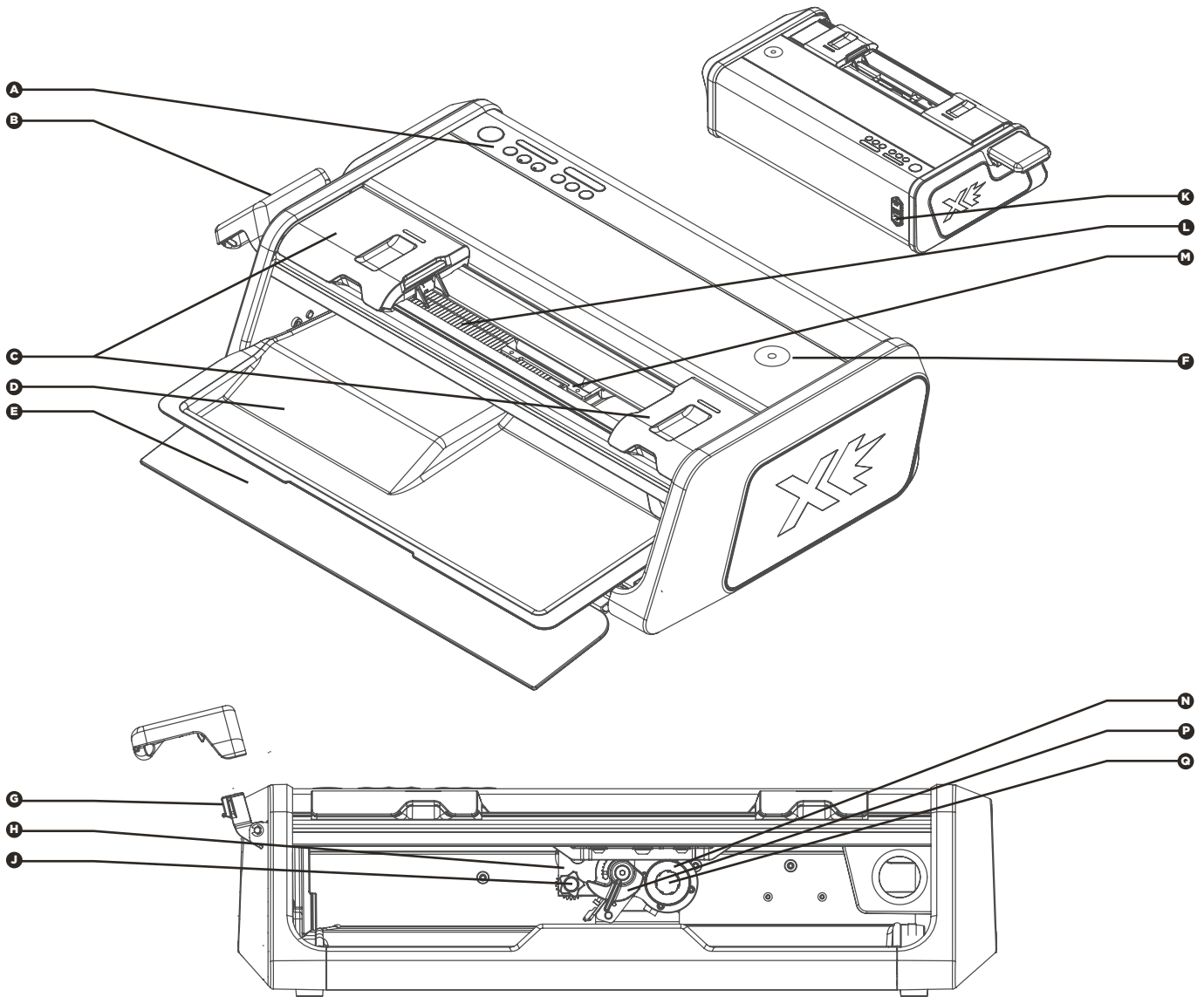
Weight: 38.5 Pounds / 17.5 kg

### ELECTRICAL

Line Voltage: 100-240 Volts AC (50-60 Hz single phase)

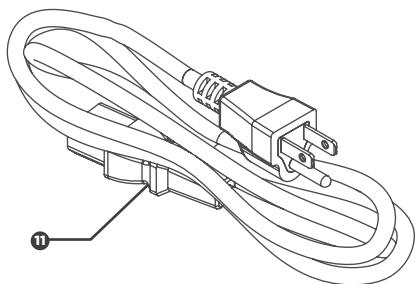
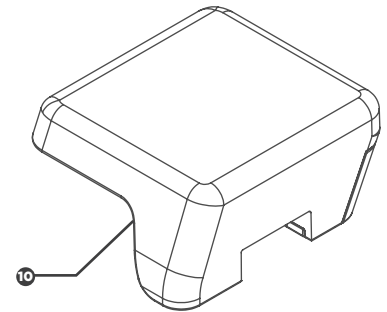
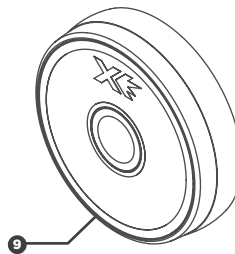
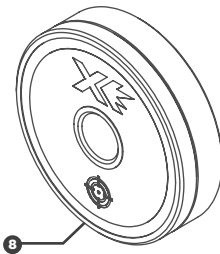
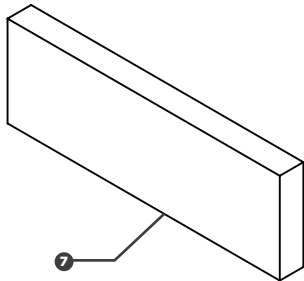
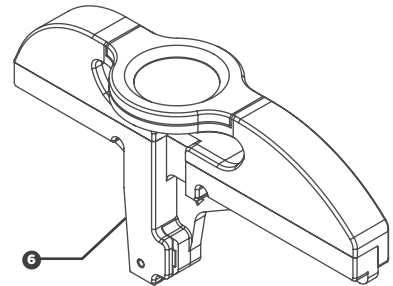
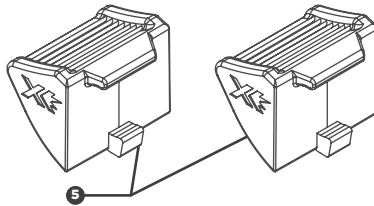
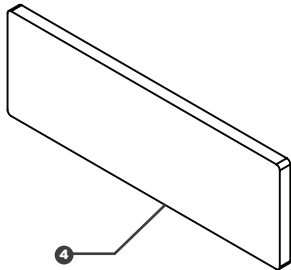
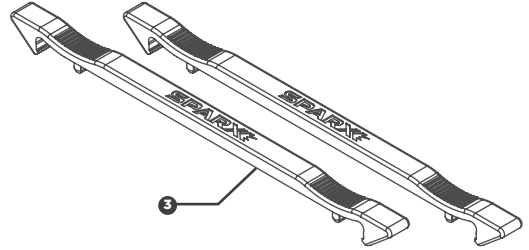
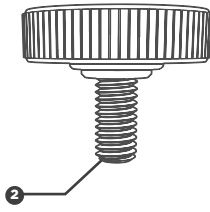
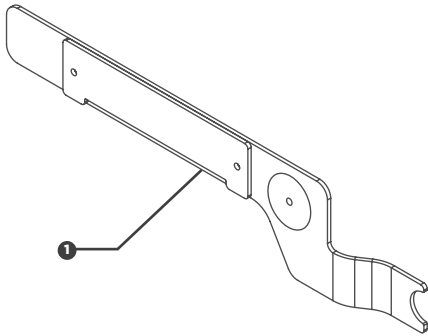
Maximum Power Consumption: 200 W

## GETTING TO KNOW YOUR SPARX SHARPENER

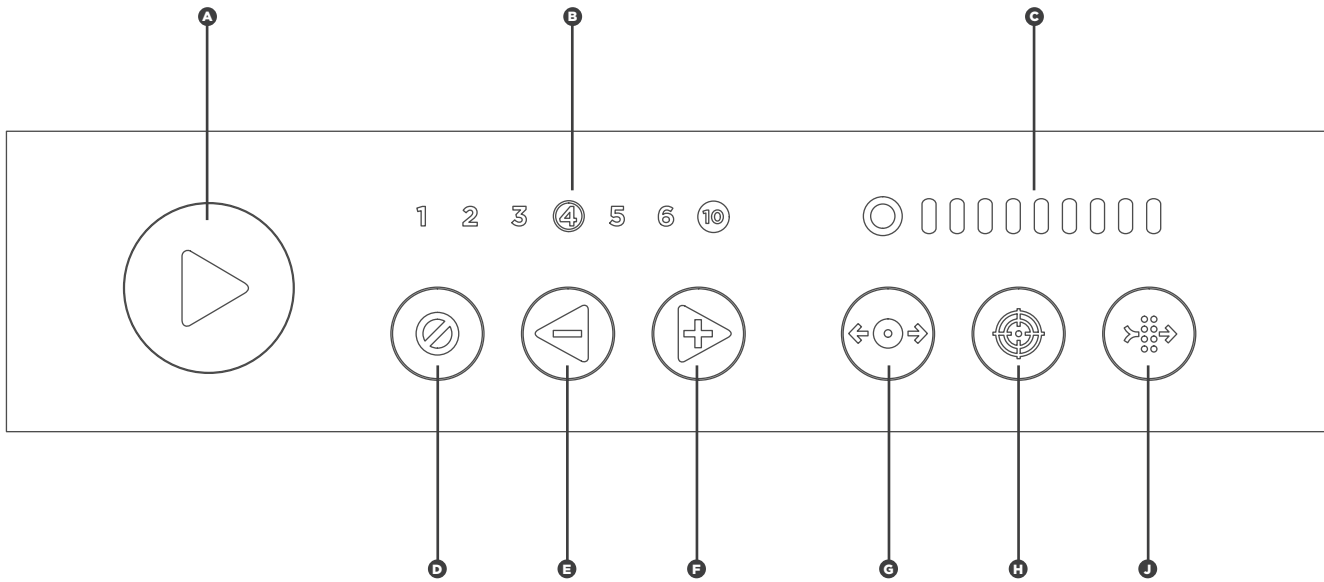


PART	DESCRIPTION
A	Keypad
B	Clamp Lever
C	Protective Slot Covers
D	Dust Tray
E	Glass Door
F	Travel Screw Slot
G	Lever Dock
H	Carriage
J	Alignment Adjustment Knob
K	Power Input Port
L	Air Filter
M	Skate Clamp
N	Grinding Ring Shaft
P	Height Adjustment Knob
Q	Thumb Nut

WHAT'S IN THE BOX?



PART	DESCRIPTION
1	Travel Guard
2	Travel Screw
3	Goalie Risers (2)
4	Leather Strop
5	Youth Skate Adapters (2)
6	Optical Alignment Tool
7	Honing Stone
8	Alignment Ring
9	Grinding Ring
10	Clamp Lever
11	Power Cord



PART	BUTTON	DESCRIPTION
A	Play	Initiates the sharpening.
B	Cycle Counter	<ul style="list-style-type: none"> <li>Shows the current number of cycles selected.</li> <li>Shows error codes.</li> </ul>
C	Grinding Ring Life Indicator	Indicates <b>Grinding Ring</b> life status. See Grinding Ring Life Indicator Behavior table on page 13.
D	Cancel / Error	<ul style="list-style-type: none"> <li>Push 1 time to stop the <b>Carriage</b> at the conclusion of the current pass.</li> <li>Push 2 times for emergency stop, motor stops immediately.</li> <li>When illuminated red, the sharpener is in an error state, see Troubleshooting section of manual.</li> </ul>
E	Minus Cycles / Move Left	<ul style="list-style-type: none"> <li>Subtracts cycles from the <b>Cycle Counter</b>.</li> <li>If in <b>Move Mode</b>, moves <b>Carriage</b> to the left.</li> </ul>
F	Add Cycles / Move Right	<ul style="list-style-type: none"> <li>Adds cycles from the <b>Cycle Counter</b>.</li> <li>If in <b>Move Mode</b>, moves <b>Carriage</b> to the right.</li> </ul>
G	Move	Initiates <b>Move Mode</b> .
H	Alignment	Initiates <b>Alignment Mode</b> .
J	Air Filter	Indicates replacement needed.

## GRINDING RING LIFE INDICATOR BEHAVIOR



In normal operation, each part of the **Grinding Ring Life Indicator** corresponds to 10% of the **Grinding Ring's** life. These parts are the one circle and the nine bars to the right (10 parts total or 100%). The circle represents the final 10% of **Grinding Ring** life and each bar to the right is an additional 10%. When a part is illuminated, that corresponding 10% life is present on the **Grinding Ring**. When the part is no longer illuminated that amount of the wheel life has been consumed.

The circle of the **Grinding Ring Life Indicator** can also behave in other ways to indicate different operating conditions to the user. Refer to the table below for more information.

ICON	ACTION	DESCRIPTION
	Circle is white and steady.	The <b>Grinding Ring</b> has more than 10% of life remaining.
	Circle is white and pulsing.	<b>Grinding Ring</b> has less than 10% of life remaining. We Recommend that the user order a replacement <b>Grinding Ring</b> by visiting <a href="http://www.sparxhockey.com">www.sparxhockey.com</a> .
	Circle is white and blinking.	User has attempted to start <b>Alignment Mode</b> while a <b>Grinding Ring</b> is installed.
	Circle is red and steady.	No <b>Grinding Ring</b> installed.
	Circle is red and pulsing.	During sharpening, the <b>Grinding Ring</b> has less than 10% of life remaining. We Recommend that the user order a replacement <b>Grinding Ring</b> by visiting <a href="http://www.sparxhockey.com">www.sparxhockey.com</a> .
	Circle is red and blinking.	<b>Grinding Ring</b> is Empty.
	Circle half red/half white - alternate blinking.	User has attempted to sharpen with a cycle count greater than the number of cycles remaining on the <b>Grinding Ring</b> .



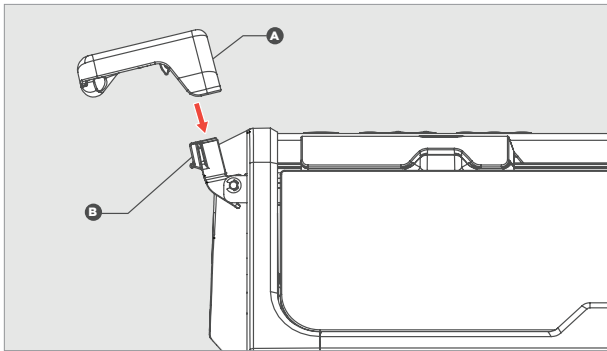
# 3 SETUP

## ASSEMBLING THE SHARPENER

▶ To watch the How-To video, visit [sparxhockey.com/assembly](http://sparxhockey.com/assembly).

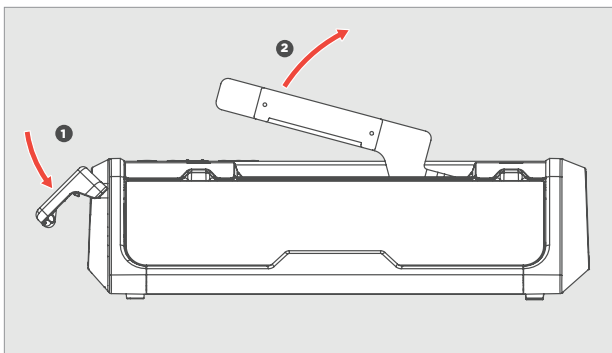
### 1 INSTALL THE CLAMP LEVER

Slide the **Clamp Lever** (A) onto the **Lever Dock** (B). Press the lever down until it clicks into place. When the **Clamp Lever** is engaged, it will lay at a slight angle.



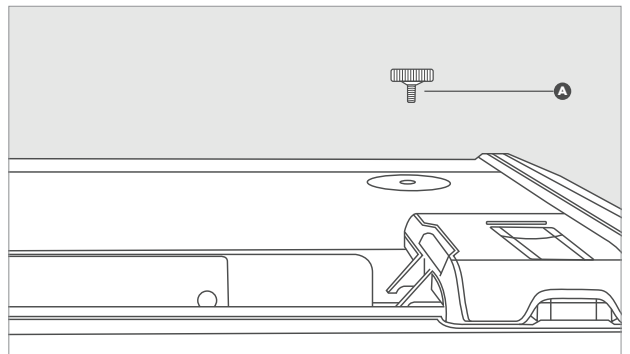
### 2 REMOVE THE TRAVEL GUARD

Open the **Skate Clamp** by pressing and holding down the **Clamp Lever**. Remove the **Travel Guard**. Release the **Clamp Lever**.



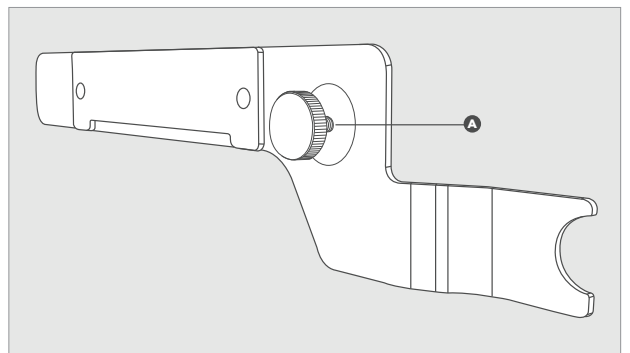
### 3 REMOVE THE TRAVEL SCREW

Remove the **Travel Screw** (A) by turning counter-clockwise until loose.



### 4 STORING THE TRAVEL SCREW

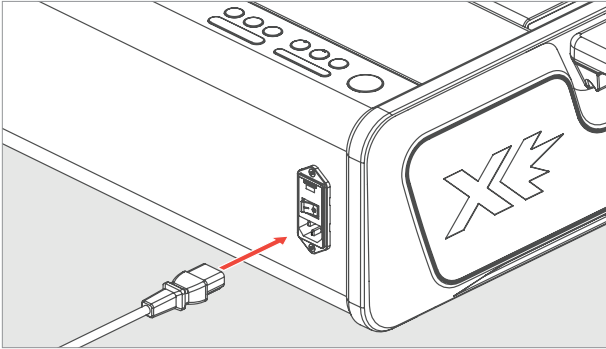
Install the **Travel Screw** into the storage location on the **Travel Guard** (A) by turning clockwise until hand-tight. Do not over-tighten.



Transporting or moving the Sharpener without the **Travel Guard & Travel Screw** installed voids your **Warranty and/or Extended Service Plan**. Always remove the **Travel Guard & Travel Screw** before operating the Sparx Sharpener.

**5 PLUG IN THE POWER CORD**

Plug the **Power Cord** into the **Power Input Port** on the back of the sharpener. Plug the other end into a wall outlet. Toggle the switch on the **Power Input Port** to the on position (I=on, O=off).



**ALIGNMENT**

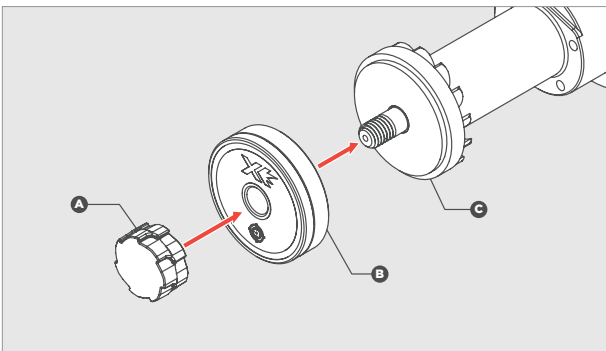
To watch the How-To video, visit [sparxhockey.com/alignment](http://sparxhockey.com/alignment).



The Alignment process is required when you first receive your Sparx™ Sharpener and also after every time the sharpener is moved and/or travels.

**1 INSTALL THE ALIGNMENT RING**

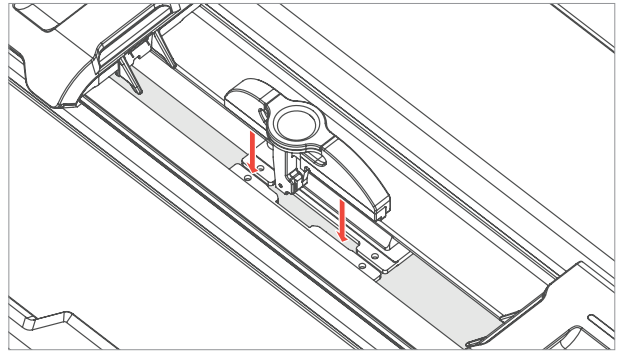
Open the **Glass Door**. The **Carriage** will automatically move into the install position, and the sharpener will play a “ready” tone. While holding the **Grinding Ring Shaft (C)**, unscrew the **Thumb Nut (A)**. Slide the **Alignment Ring (B)** onto the **Grinding Ring Shaft (C)**, with the label facing out. Replace and tighten the **Thumb Nut** until hand-tight. Close the **Glass Door**.



**2 INSTALL THE OPTICAL ALIGNMENT TOOL**

Press down on the **Clamp Lever** to open the **Skate Clamp**. Place the **Optical Alignment Tool** (with Sparx™ logo facing

towards the user) into the **Skate Clamp**. Place the **Optical Alignment Tool** into the slot and let it fall into place. Release the **Clamp Lever**.

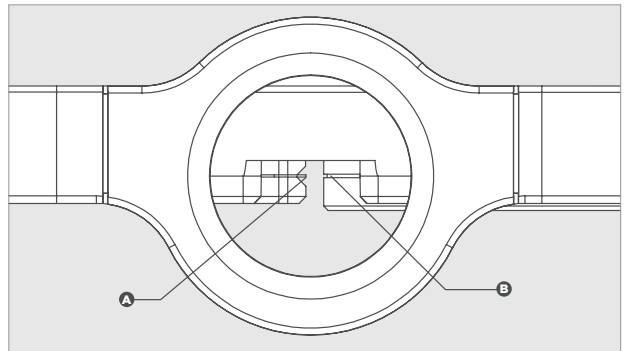


**3 INITIATE ALIGNMENT MODE**

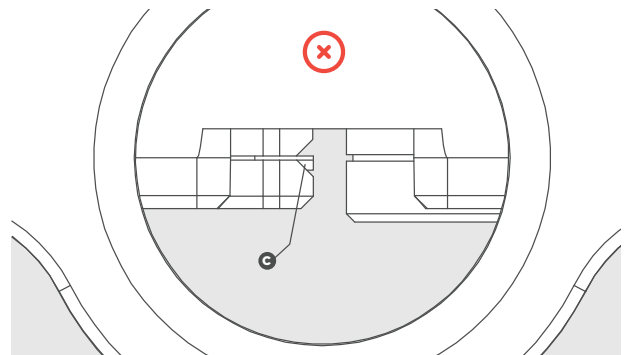
Press the **Alignment Button** to send the **Carriage** to its alignment position. When the **Carriage** is in place, a tone will sound and the case will illuminate white.

**4 LOCATE THE TAB AND GROOVE**

Look through the eyepiece of the **Optical Alignment Tool** and locate the indicator tab (A) of the **Optical Alignment Tool** and the groove (B) on the **Alignment Ring**.



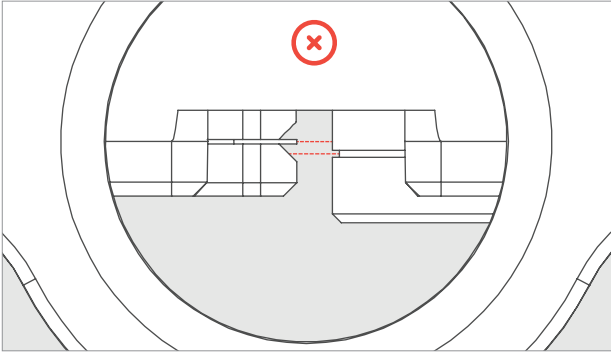
Ensure you are looking straight through the eyepiece directly above the indicator tab and groove. If you see the indicator tab side wall (C) when looking through the eyepiece, you are not directly above the indicator tab and groove. Adjust your line of sight until you can no longer see the indicator tab side wall.



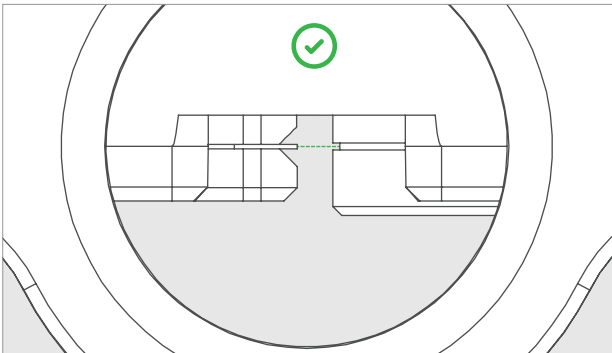


**5 INSPECT THE ALIGNMENT**

If the indicator tab of the **Alignment Tool** is not aligned with the groove on the **Alignment Ring** (as shown below), move to step 6.

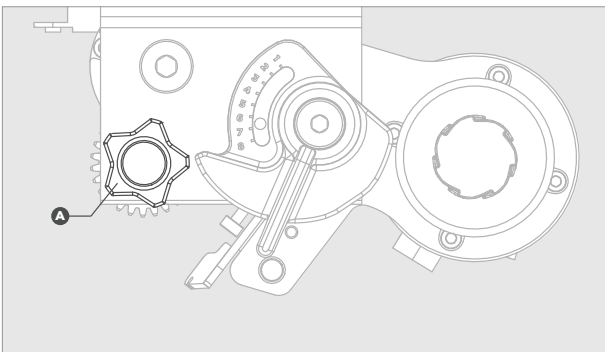


If the indicator tab of the **Alignment Tool** is aligned with the groove on the **Alignment Ring** (as shown below) skip to step 8.



**6 LOCATE THE ALIGNMENT ADJUSTMENT KNOB**

Open the **Glass Door** and locate the gray **Alignment Adjustment Knob** (A) inside of the sharpener.



**7 ADJUST THE ALIGNMENT**

While looking through the **Optical Alignment Tool**, turn the **Alignment Adjustment Knob** until the groove on the

**Alignment Ring** (right) lines up with the indicator tab of the **Alignment Tool** (left), as shown in step 5. Close the **Glass Door** when aligned.

**8 END ALIGNMENT MODE**

End **Alignment Mode** by pressing the **Alignment Button**.

**9 REMOVE THE OPTICAL ALIGNMENT TOOL**

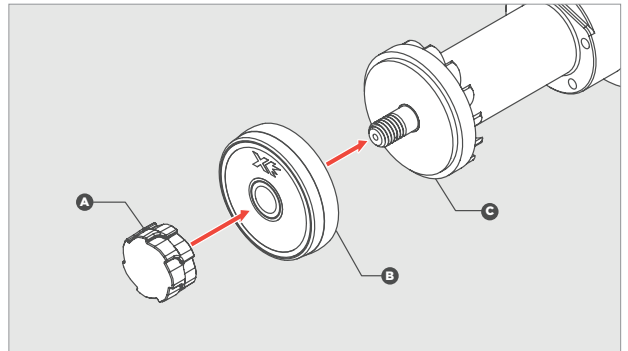
Press down on the **Clamp Lever** to open the **Skate Clamp**. Remove the **Optical Alignment Tool**.

**10 REMOVE THE ALIGNMENT RING**

Open the **Glass Door**. The **Carriage** will automatically move into the install position and the sharpener will play a "ready" tone. While holding the **Grinding Ring Shaft**, unscrew the **Thumb Nut** and remove the **Alignment Ring**.

**11 INSTALL THE GRINDING RING**

While holding the **Grinding Ring Shaft** (C), slide the **Grinding Ring** (B) on the **Grinding Ring Shaft** (C), label facing out, and replace and tighten the **Thumb Nut** (A) until hand-tight. Close the **Glass Door**.





# 4

## OPERATION

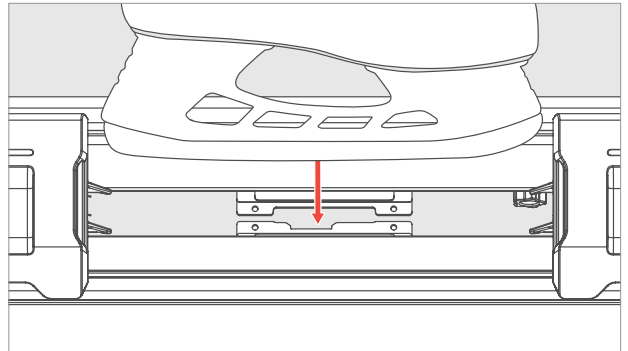
### LOADING A SKATE

*\*For loading goalie skates and youth skates, see the end of this section.*

▶ To watch the How-To video, visit [sparxhockey.com/loadskate](http://sparxhockey.com/loadskate).

#### 1 LOAD THE SKATE

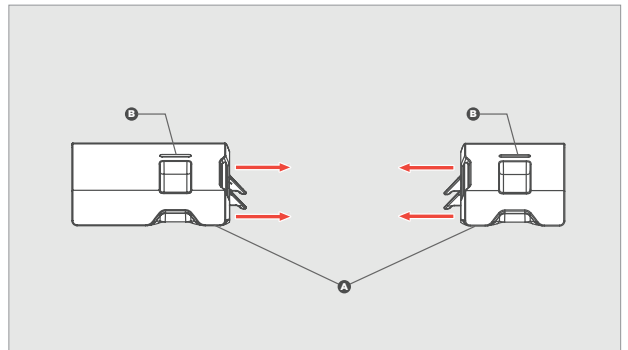
Press and hold down the **Clamp Lever** to open the **Skate Clamp**. With the skate toe pointing right and the laces tucked into the skate, set the skate into the **Skate Clamp** slot letting the plastic blade holder rest on top of the clamps. Center the skate blade in the **Skate Clamps**. Release the **Clamp Lever**.



We recommend inserting the skate into the **Skate Clamp** with the toe pointing to the right. For most skate blades, this orientation allows for the greatest flexibility in **Grinding Ring** height adjustment. It is, however, acceptable to insert the skate with the toe facing in either direction.

#### 2 CLOSE THE PROTECTIVE SLOT COVERS

Move each **Protective Slot Cover** (A) in toward the skate until they touch the blade holder and the **Safety Lights** (B) extinguish.



# ADJUSTING THE GRINDING RING HEIGHT

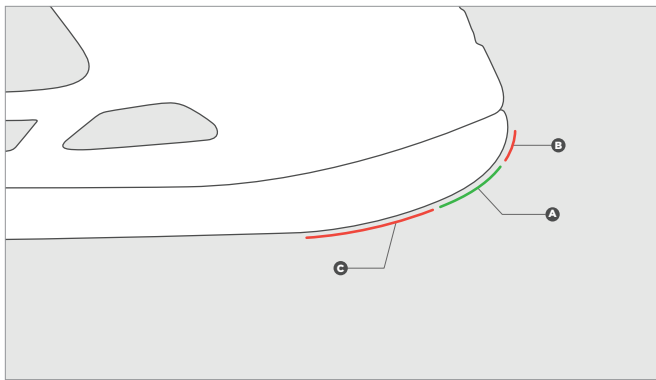
📺 To watch the How-To video, visit [sparxhockey.com/ringheight](https://sparxhockey.com/ringheight).

**!**

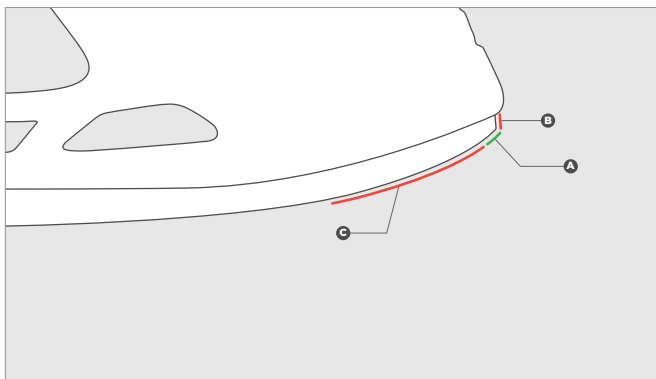
For every pair of skates sharpened, you must assess the height of the **Grinding Ring** and adjust if necessary.

We will first introduce a few new concepts, and then move into the actual adjustment. We want to first 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).



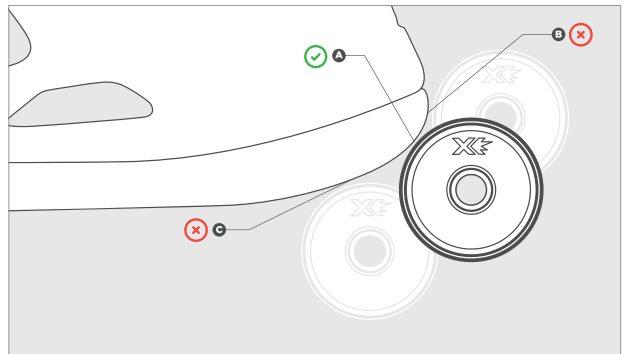
When the intersection zone is a point, which is more common with skates that have been sharpened multiples times (A as shown above), the first contact between the **Grinding Ring** and the blade should be just below the point.

## 1 INITIATE MOVE MODE

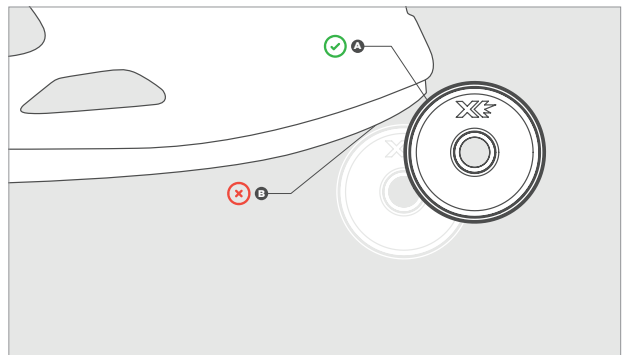
Press the **Move Button** on the **Keypad**. This will set the **Grinding Ring** into **Move Mode** and allow you to control its movement.

## 2 INSPECT THE CONTACT POINT

Use the **Left** 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 is too high (B) and too low (C). A **Grinding Ring** contacting in the right zone is shown below as A. 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.

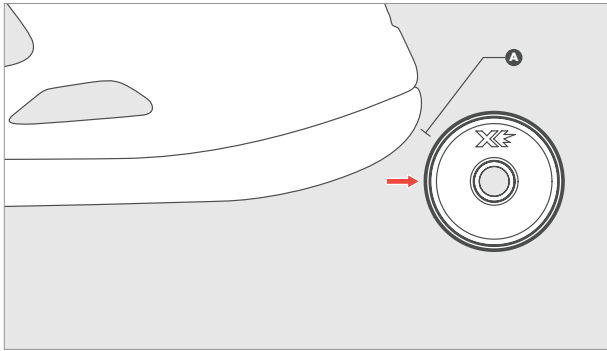


If the skate blade is worn down the graphic below shows a contact point that is too low (B) and a **Grinding Ring** contacting the blade at the proper point (A).



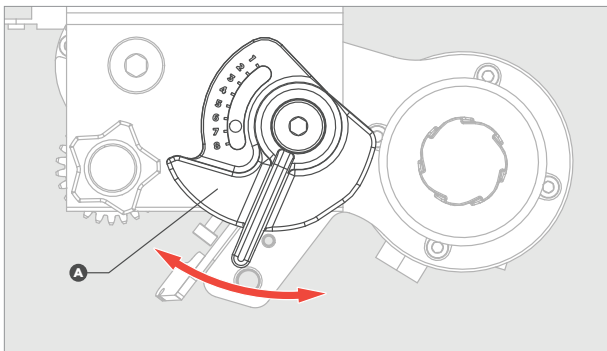
**3 MOVE THE CARRIAGE INTO POSITION**

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**

Open the **Glass Door**. 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**

Close the **Glass Door**. Once the **Glass Door** has been closed, 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**

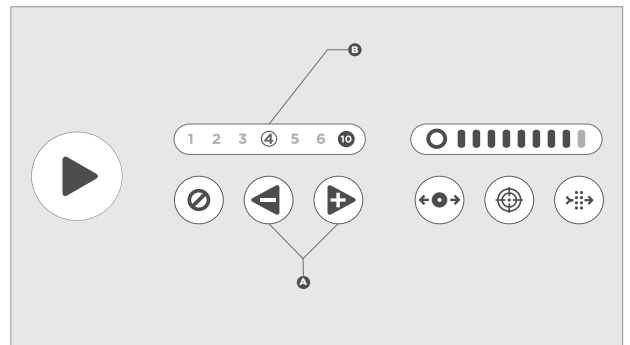
To watch the How-To video, visit [sparxhockey.com/cycle](http://sparxhockey.com/cycle).

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

▶ To watch the How-To video, visit [sparxhockey.com/sharpening](http://sparxhockey.com/sharpening).

Once you have loaded the skate, closed the **Protective 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.



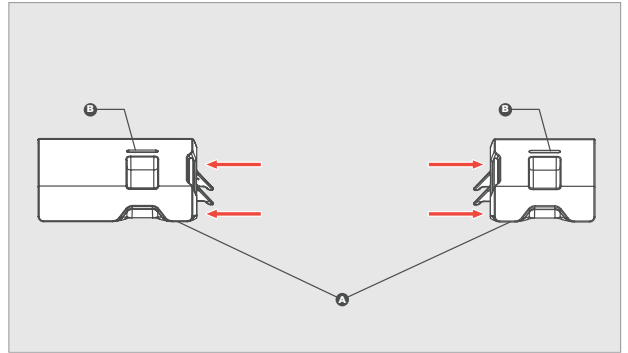
If the **Grinding Ring** skips when it first makes contact with the blade, the **Grinding Ring's** height is too high. When properly set, the **Grinding Ring** should make a smooth transition onto the skate blade.

## UNLOADING A SKATE

▶ To watch the How-To video, visit [sparxhockey.com/unloadskate](http://sparxhockey.com/unloadskate).

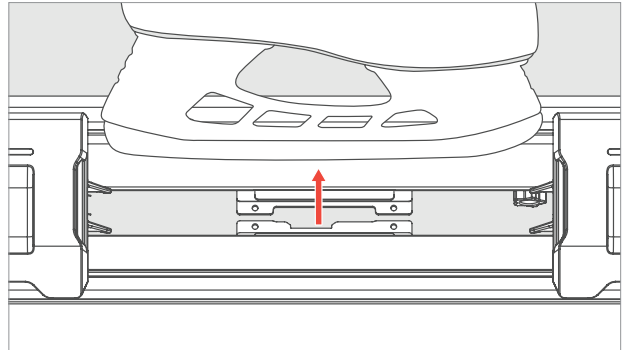
### 1 DISENGAGE PROTECTIVE SLOT COVERS

Move both **Protective Slot Covers** (A) away from the skate. The safety light on each cover (B) will illuminate.



### 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

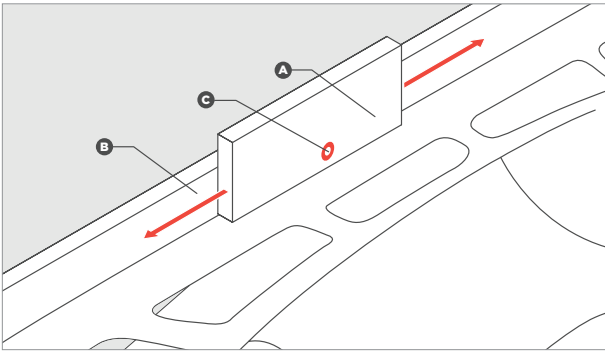
▶ To watch the How-To video, visit [sparxhockey.com/deburr](http://sparxhockey.com/deburr).



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.

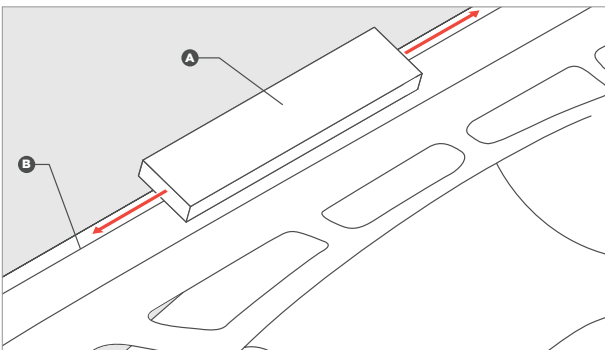


### 2 REPEAT ON THE OPPOSITE SIDE

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.

## POWERING OFF

### 1 LOCATE THE POWER INPUT PORT

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

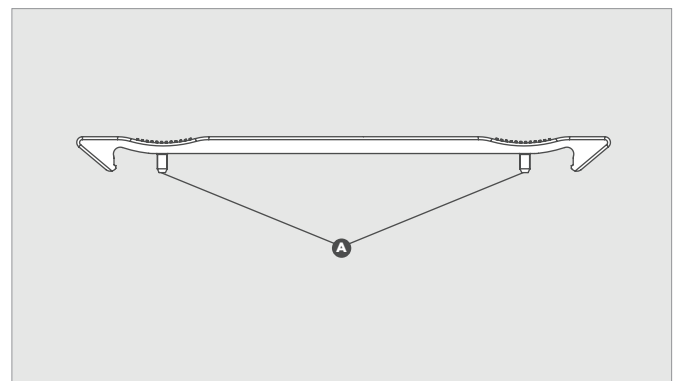
### 2 TURN OFF THE SHARPENER

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

## GOALIE SKATES

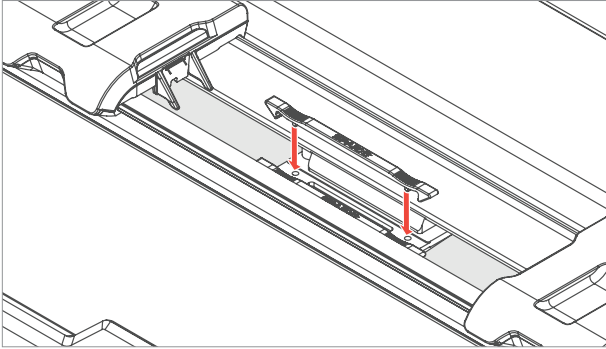
▶ To watch the How-To video, visit [sparxhockey.com/loadgoalie](http://sparxhockey.com/loadgoalie).

Before loading a goalie skate, you must first install the **Goalie Risers** onto the **Skate Clamp** (one **Goalie Riser** on each side of the **Skate Clamp**). Each Goalie Riser has two **Anchor Pins** (A) as shown below.



### 1 INSTALL THE GOALIE RISERS

Align the **Anchor Pins** 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.

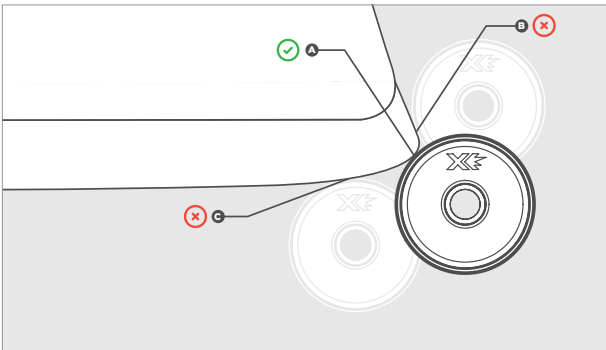


### 2 CONTINUE THE SHARPENING PROCESS

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

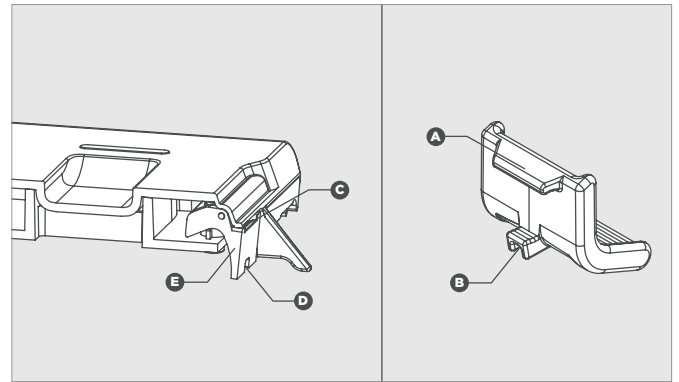
Pull up on each end of the **Goalie Risers** to remove from the **Skate Clamp**.

## YOUTH SKATES

▶ To watch the How-To video, visit [sparxhockey.com/loadyouth](http://sparxhockey.com/loadyouth).

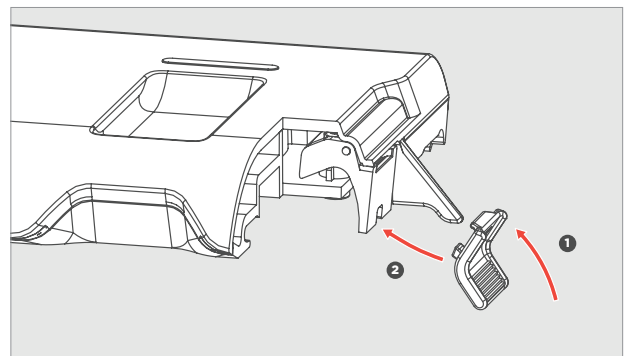
Before loading a youth skate of size 12 or smaller, **Youth Skate Adapters** must be installed onto each **Protective Slot Cover**. On the adapter, locate the **Upper Anchor Tab** (A) on the top of the adapter and then the **Lower Anchor Tab** (B) on the bottom.

Below is a cross-sectioned **Protective Slot Cover**. Locate the recessed slot (C) and the tab cut out (D) on the **Protective Slot Cover Switch** (E).



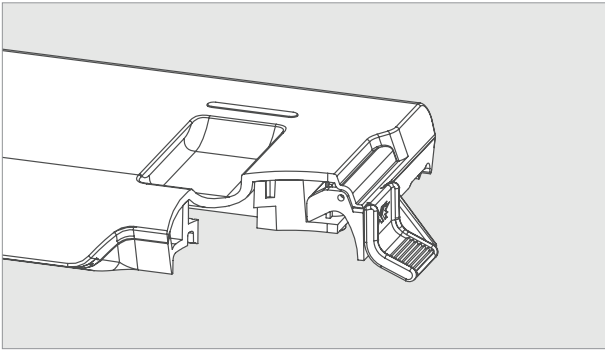
### 1 INSTALL YOUTH SKATE ADAPTERS

Press the **Upper Anchor Tab** (A in figure above) into the tab cut out (C in figure above). Once it is in, rotate and press down firmly on the bottom of the **Youth Skate Adapter** until the **Lower Anchor Tab** clicks in place.





Below is how an installed Youth Skate Adapter will look.

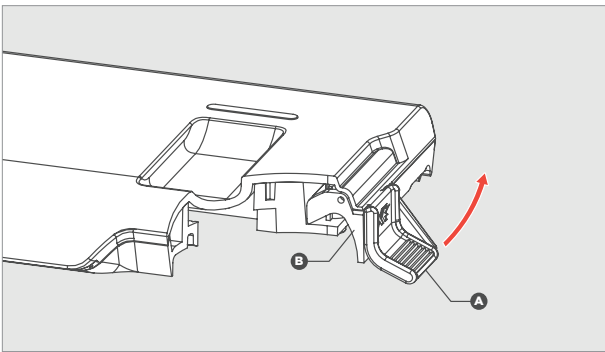


**2 CONTINUE THE SHARPENING PROCESS**

Refer to "Load the Skate" in the Operation section of the manual.

**3 REMOVE YOUTH SKATE ADAPTERS**

Press up on the lip (A) of the Youth Skate Adapter until it clicks out from the Protective Slot Cover Switch (B).



## SHARPENING NEW STEEL

To watch the How-To video, visit [sparxhockey.com/newsteel](http://sparxhockey.com/newsteel).



Before loading new steel, try taking a dark colored marker and running it down 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**

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.



# TROUBLESHOOTING

## ERROR TYPES

There are two types of errors encountered by the Sparx™ 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).	<ul style="list-style-type: none"> <li>• Displayed through the user interface (e.g. flashing lights at the area of concern, such as the <b>Protective Slot Cover</b> lights).</li> <li>• Temporarily displayed on the <b>Cycle Counter</b>.</li> <li>• Not saved to Error History.</li> </ul>
II: System Stop	Errors that cause the sharpener to exit out of a function because of safety concerns or to prevent sharpener damage.	<ul style="list-style-type: none"> <li>• Displayed on the <b>Cycle Counter</b>.</li> <li>• All functionality is disabled until the user acknowledges the error by pressing the <b>⊘ Cancel Button</b>.</li> <li>• Saved to Error History.</li> </ul>

## 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
Left <b>Protective Slot Cover</b> Is blinking when attempting to sharpen a skate.	Left <b>Protective Slot Cover</b> is not securely engaged.	<ul style="list-style-type: none"> <li>Adjust skate and <b>Protective Slot Covers</b> until contact is made between <b>Protective Slot Covers</b> and both ends of the installed skate. LEDs on <b>Protective Slot Covers</b> should be extinguished.</li> <li>Use <b>Youth Skate Adapters</b> if skate is too small to make contact with both <b>Protective Slot Covers</b>.</li> </ul>
Right <b>Protective Slot Cover</b> Is blinking when attempting to sharpen a skate.	Right <b>Protective Slot Cover</b> is not securely engaged.	<ul style="list-style-type: none"> <li>Adjust skate and <b>Protective Slot Covers</b> until contact is made between <b>Protective Slot Covers</b> and both ends of the installed skate. LEDs on <b>Protective Slot Covers</b> should be extinguished.</li> <li>Use <b>Youth Skate Adapters</b> if skate is too small to make contact with both <b>Protective Slot Covers</b>.</li> </ul>
 <b>Air Filter Button</b> is illuminated red.	<b>Air Filter</b> is either not installed or requires attention.	<ul style="list-style-type: none"> <li>Install <b>Air Filter</b>.</li> <li>Press and hold button for two seconds until two beeps sound to reset the <b>Air Filter's</b> life.</li> </ul>
Interior case light is blinking red.	<b>Dust Tray</b> is missing.	Reinstall <b>Dust Tray</b> .
<b>Grinding Ring Life Indicator</b> circle is blinking red/white.	<b>Grinding Ring</b> has insufficient life remaining for selected sharpening operation.	Sharpener will reset <b>Cycle Count</b> to maximum available cycles, run sharpener with the new value or lower.
<b>Grinding Ring Life Indicator</b> circle is blinking red.	<b>Grinding Ring</b> not found. / <b>Grinding Ring</b> empty.	Install a valid <b>Grinding Ring</b> .

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

### SPARX HOCKEY CUSTOMER SUPPORT

help@sparxhockey.com (fastest response)

1-855-SPARX HQ (1-855-772-7947)

## 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 - 4	Glass Door open.	Close <b>Glass Door</b> .
1 - 2 - 5	Excessive <b>Glass Door</b> opening during alignment.	Attempt alignment again while leaving <b>Glass Door</b> closed until <b>Carriage</b> stops at alignment location.
1 - 2 - 6	<b>Dust Tray</b> missing.	Confirm that <b>Dust Tray</b> is correctly installed.
1 - 2 - 10	<b>Air Filter</b> missing.	Install <b>Air Filter</b> .
1 - 3 - 10	Attempted to start <b>Alignment Mode</b> with skate or <b>Grinding Ring</b> installed.	Remove skate and install <b>Alignment Ring</b> .
1 - 4 - 5	Pressed the <b>Play Button</b> in <b>Alignment Mode</b> .	Exit <b>Alignment Mode</b> by pressing the <b>Alignment Button</b> or <b>Cancel Button</b> prior to pressing the <b>Play</b> button.
1 - 4 - 6	Pressed the <b>Play Button</b> in <b>Move Mode</b> .	Exit <b>Move Mode</b> by pressing the <b>Move Button</b> or <b>Cancel Button</b> prior to pressing the <b>Play</b> button.
1 - 5 - 10	Left <b>Protective Slot Cover</b> disengaged.	<ul style="list-style-type: none"> <li>Adjust skate and <b>Protective Slot Covers</b> until contact is made between <b>Protective Slot Covers</b> and both ends of the installed skate. LEDs on <b>Protective Slot Covers</b> should be extinguished.</li> <li>Use <b>Youth Skate Adapters</b> if skate is too small to make contact with both <b>Protective Slot Covers</b>.</li> </ul>
1 - 6 - 10	Right <b>Protective Slot Cover</b> disengaged.	<ul style="list-style-type: none"> <li>Adjust skate and <b>Protective Slot Covers</b> until contact is made between <b>Protective Slot Covers</b> and both ends of the installed skate. LEDs on <b>Protective Slot Covers</b> should be extinguished.</li> <li>Use <b>Youth Skate Adapters</b> if skate is too small to make contact with both <b>Protective Slot Covers</b>.</li> </ul>
2 - 3 - 6	Sharpener failed to detect skate.	Ensure that skate is installed in the <b>Skate Clamp</b> correctly and the <b>Grinding Ring</b> height is adjusted properly.
2 - 4 - 6	<b>Grinding Ring</b> has insufficient life remaining for selected sharpening operation.	Sharpener will reset <b>Cycle Count</b> to maximum available cycles. Run sharpener with the new value or lower.
2 - 4 - 10	<b>Grinding Ring</b> empty.	Install a valid <b>Grinding Ring</b> .
2 - 5 - 6	<b>Grinding Ring</b> not found.	Install a valid <b>Grinding Ring</b> .
2 - 5 - 10	<b>Grinding Ring</b> read incomplete.	Repeat process and allow extra time between steps. If this does not resolve the problem, replace the <b>Grinding Ring</b> .
2 - 6 - 10	<b>Grinding Ring</b> read error.	Install a valid <b>Grinding Ring</b> .
3 - 5 - 10	Grinding motor overcurrent.	Confirm that the <b>Grinding Ring</b> height is adjusted properly and nothing is obstructing the <b>Grinding Ring</b> .
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 <b>Carriage</b> 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



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

## REMOVING AND EMPTYING THE DUST TRAY

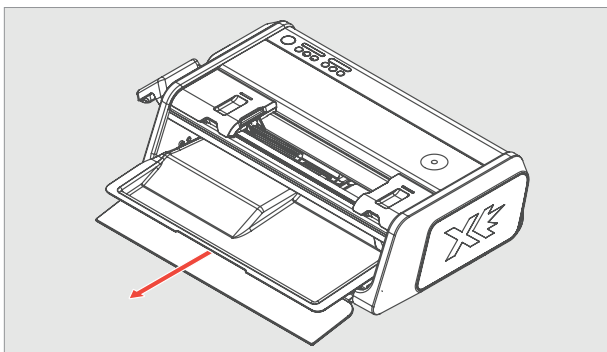
▶ To watch the How-To video, visit [sparxhockey.com/dusttray](http://sparxhockey.com/dusttray).

**Maintenance Frequency:** Perform the following steps after every ½ 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 DUST TRAY

Open the **Glass Door** and remove the **Dust Tray**. To empty **Dust Tray**—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 REPLACE THE DUST TRAY

Slide the **Dust Tray** back into the machine. Close the **Glass Door**.

## REPLACING THE AIR FILTER

To order a replacement **Air Filter**, visit [sparxhockey.com/filter](http://sparxhockey.com/filter).

▶ To watch the How-To video, visit [sparxhockey.com/airfilter](http://sparxhockey.com/airfilter).

**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 REMOVE AND EMPTY THE DUST TRAY

Open the **Glass Door** and remove the **Dust Tray**. To empty **Dust Tray**—wipe completely clean with a damp cloth (water).



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

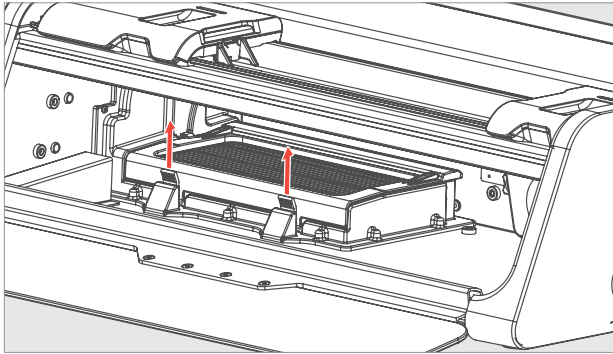
### 2 VACUUM SHARPENER

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

### 3 REMOVE THE AIR FILTER

Open the top lid of the **Air Filter Housing** until it clicks into the open position. Keeping it horizontal, carefully remove the **Air Filter**. Vacuum remaining dust from the **Filter Housing** area.



-  On removal do not tip the **Filter** and let dust particles fall into the empty **Filter Housing**.
-  Take care not to damage the **Filter Seal** inside the **Filter Housing** when cleaning or vacuuming.



### 4 INSTALL NEW AIR FILTER

Insert the new **Air Filter** into the filter housing. The **Air Filter** label will indicate installation direction which side to install up.

### 5 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**.

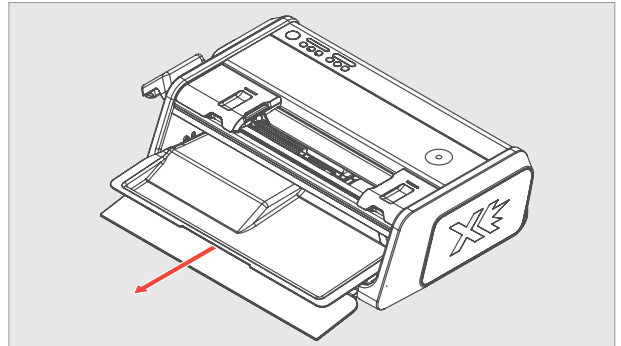
## TRAVELING WITH THE SHARPENER

 To watch the How-To video, visit [sparxhockey.com/travel](http://sparxhockey.com/travel).

### 1 REMOVE AND EMPTY THE DUST TRAY

Open the **Glass Door** and remove the **Dust Tray**. To empty **Dust Tray**—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 REPLACE THE DUST TRAY

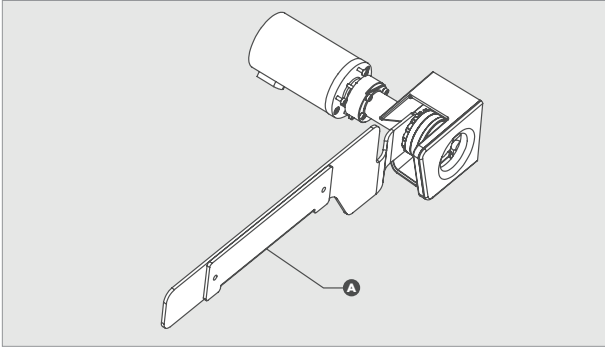
Slide the **Dust Tray** back into the machine. Close the **Glass Door**.

### 4 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 Shaft's** impeller as



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

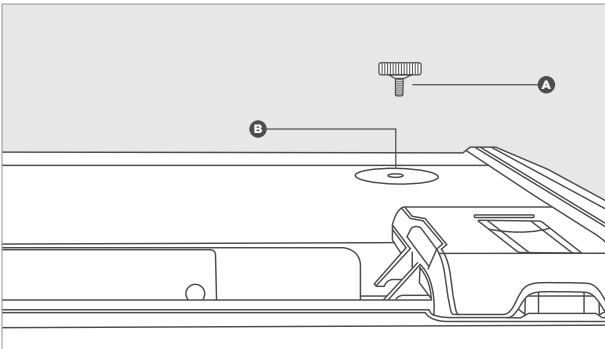


**!**

When setting up the Sparx Sharpener after travel, wipe down the **Grinding Ring Shaft'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 Shaft** and the **Grinding Ring**.

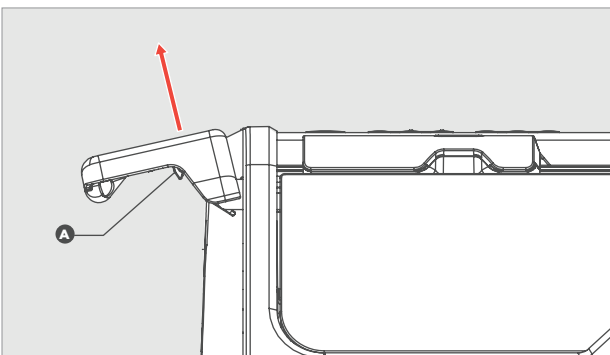
**5** INSTALL THE TRAVEL SCREW

Install the **Travel Screw (A)** into the **Screw Slot (B)** by turning clockwise until hand-tight.



**6** REMOVE THE CLAMP LEVER

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



# 7

## WARRANTY

### LIMITED ONE YEAR PRODUCT WARRANTY

Velasa Sports, Inc. d.b.a. Sparx Hockey (“Velasa Sports”) represents and warrants to the end-user (“End User”) that, under normal use and provided that you have followed our reasonable care and maintenance instructions, your Sparx® ES100 Sharpener (the “Product”) will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment from Sparx Hockey or an authorized Sparx Hockey reseller or 10,000 sharpening cycles (whichever comes first). Your exclusive remedy and our sole obligation is to repair or replace any Product that Velasa Sports reasonably determines does not comply with this warranty or, at our sole discretion, to accept return of such Product and refund to you the price paid therefor.

Products that have been repaired or replaced hereunder shall be covered by this warranty for the longer of thirty (30) days after being shipped back to you or the remainder of the original 1-year / 10,000 cycle (whichever comes first) warranty period. Any defective Product or component that is replaced becomes the sole property Velasa Sports.

### HOW TO MAKE A WARRANTY CLAIM

If you experience any problems with your Sparx® Product, please contact Customer Service at [help@sparxhockey.com](mailto:help@sparxhockey.com). In order to make a warranty claim, a valid proof of purchase is required. A valid proof of purchase is either a valid order number from the [sparxhockey.com](http://sparxhockey.com) website or a dated sales receipt from an authorized Sparx Hockey Dealer or Reseller that shows date of shipment and a description of the product along with its price.

Upon confirmation and approval of your warranty claim, we will assign a return material authorization number (“RMA”). At your risk

and expense, you must deliver the nonconforming Product (with prominent indication of the RMA) to Velasa Sports or its designated repair center. This Warranty, and any associated RMA activity, is only valid in United States and Canada. In the event of a [sparxhockey.com](http://sparxhockey.com) or authorized online Sparx Hockey Dealer or Reseller purchase, the Warranty is only valid in the United States and Canada.

Products returned without an RMA shall not be afforded warranty service, and you shall be liable for all costs and expenses incurred by us in connection with servicing the unauthorized return.

### EXCLUSIONS

All claims under this limited warranty must be made during the applicable warranty period.

The limited warranty obligations do not cover physical damage sustained from improper handling during shipping. This limited warranty shall be void and not apply as to any Product that was (a) used, handled, operated, maintained, or stored improperly, or in any manner not in accord with our documentation, instructions, maintenance procedures, or recommendations; (b) subjected to unusual physical or electrical stress; (c) subjected to abuse, misuse, accident, neglect; (d) exposed to moisture, flooding, fire, electrical problems associated with incoming power or other acts not the fault of Velasa Sports; (e) repaired, altered, or modified by anyone other than Velasa Sports or its authorized agents; This limited warranty shall be void and not apply to any Product damage caused by repairs made or attempted by anyone other than Velasa Sports or its authorized agents. This limited warranty shall be void and not apply to any Product damage caused by hardware modifications or through the use of any parts or accessories that were not certified or approved by Velasa Sports, including without limitation the use of Grinding Rings not from Velasa Sports (d.b.a. Sparx Hockey). or (f) used with parts or accessories that were not certified or approved by Velasa Sports or its designated representative, including without limitation the use of Grinding Rings not from Velasa Sports (d.b.a.

Sparx Hockey). This limited warranty shall be void and not apply as to any Product that is found to have a usage history that is inconsistent with the claimed ownership history or for which the supplied proof of purchase is inconsistent with the Product returned to Velasa Sports.

Velasa Sports' limited warranty does not include coverage or liability for the loss of or damage to any Ice Skates with respect to which the Sparx® Product was used. Velasa Sports' is not responsible for costs associated with the inaccessibility of the Sparx® Product during the service period in connection with any warranty claims.

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To request a copy of a past revision of a Sparx Hockey warranty, please send an email to [help@sparxhockey.com](mailto:help@sparxhockey.com) and specify the desired warranty type and revision date. Sparx Hockey may request confirmation of your purchase date and product description in order to confirm the appropriate warranty revision for your Product.

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