



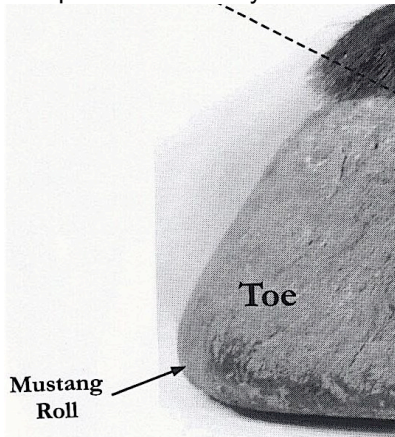
How to Use

Evolutionary Hoof Care's all new wall-rounding **Radius Rasps™**
 See video at: www.evohoofcare.com

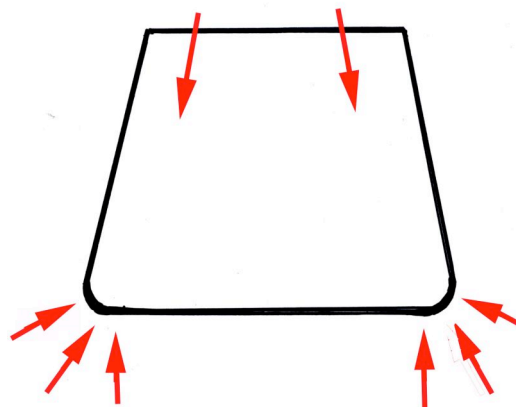
Your Goal: Creating and Maintaining the "Mustang Roll"

Horses evolved to live in dry, semi-arid environments. Under those conditions their hoof walls develop a smooth, rounded profile referred to as the "Mustang Roll." This shape influences the relationship between weight-bearing forces inside the hoof and the counter pressure of the ground surface outside the hoof in a way that is essential to healthy hoof function.

Toe wall of wild horse hoof showing healthy hoof profile created by natural wear

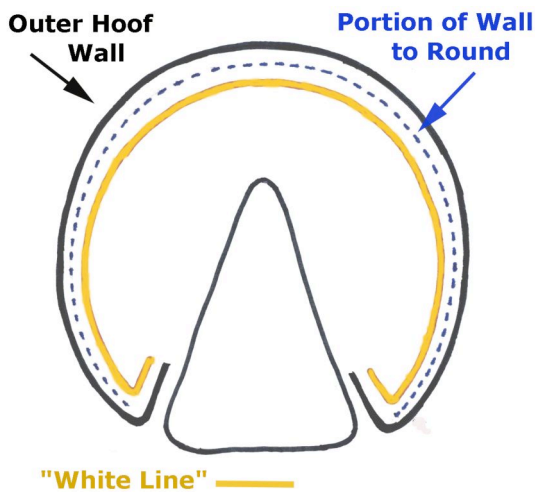


How the Mustang Roll prevents hoof shape distortion by balancing inner and outer forces

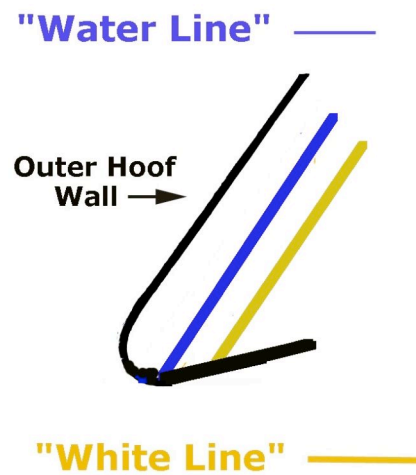


In the domestic horse, this profile is created by rounding the outer 30-50% of the width of the hoof wall to relieve it from direct contact with the surface of the ground. This shape focuses weight bearing on the inner wall and avoids direct pressure on the outer wall that produces flaring and cracking. This is what the **Radius Rasps** and **Hoof Buffers** are designed to do for you. The more consistently you maintain this form, the stronger and healthier your horse's hooves will become. How much of the wall you round depends upon the thickness of an individual hoof wall. The key objective is a uniform arc that is smoothly blended into the surface of the outer hoof wall above it.

Sole view of outer wall to be rounded:



Cross-section of rounded wall profile



Creating the Tapered Arc of the Mustang Roll

The arc or radius of the Mustang Roll is widest at the toe, tapering in height toward each heel, relative to the thickness of the hoof wall itself. Thus in rounding the hoof wall you want to create a wider arc across the toe region.



The concave blades of the **Radius Rasps** are designed to create this all-important rounded edge. Use them for full trims to create the Mustang Roll and every 2-3 weeks to maintain it.



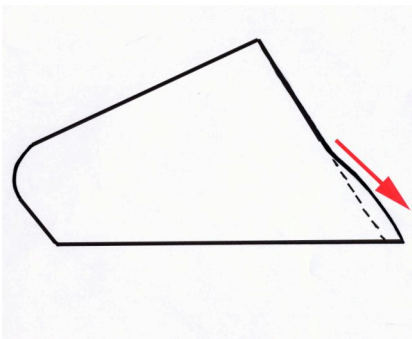
A consistent arc and a smooth wall surface are essential to healthy hoof shape. So it is best to follow the use of the **Radius Rasps** with the **Hoof Buffer** flexible sanders to smoothly blend all aspects of the arc.



Note: Do you need to trim before using the **Radius Rasps**?

The **Radius Rasps** and **Hoof Buffers** are designed for shaping and maintaining the arc of the Mustang Roll. Used on a regular basis about every 2 weeks, these tools will keep the arc in a consistent form. However, when you are trimming a hoof with excess growth of hoof wall that needs to be shortened, or has outward flare to be removed, use hoof nippers and a flat rasp first. Once you have shortened the wall, you can use these tools to rough-in a beveled or rounded edge. Then apply the **Radius Rasps** to fully form the roll. When rasping the outer wall keep your rasp parallel to the upper part of the hoof wall.

Flare to remove:



Rasping side wall flare:



Rasping toe wall flare:



When excess hoof wall has been removed, make a nipper cut along outer edge of the "Water Line." This is a faint 'line' located about half way between the White Line and the edge of the outer wall. Keep your nippers at about 90 degrees relative to the sole of the hoof. Your goal is to create a slight 'bevel' that you can round into an arc with the **Radius Rasps**.

Below, the Water Line has been marked with red dots. The nippers are removing about 1/3 of the wall thickness.



If the wall is quite thick you can use your flat rasp to begin the radius arc of the Mustang Roll. However, if you are using the **RR-2** this is usually not necessary.

Rasping inner border of hoof wall:

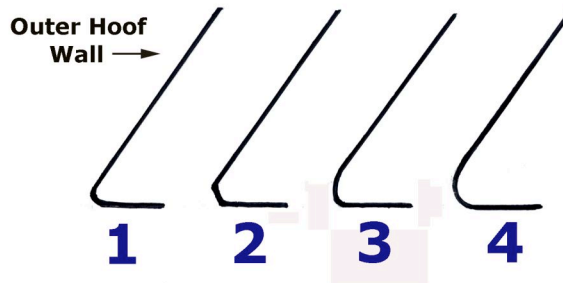


Rasping outer border of hoof wall:



Now you are ready to shape the Mustang Roll with the **Radius Rasps**.

Your goal: A smooth radius with no sharp edges or remaining wall flares. Here is a close-up photo of the toe of a hoof on a wild horse that lived in a dry climate and drawings of possible toe wall profiles.



The drawings of hoof wall profiles above show possible shapes and widths of arcs that you can create in trimming the hoof. #1 is has a thin, narrow edge This form will encourage flaring and cracking of the wall. #2 is more of a flat bevel with sharp edges , not a smooth arc. This will also encourage the layers of horn to crack and separate. #3 is rounded but has a narrow edge along the bottom. This form is also likely to encourage the wall to spread outward. #4 has the fully rounded, smooth contour of the Mustang Roll. This is the profile you need to create using the curved blades of the **Radius Rasps**.

The Two Types of Radius Rasp™

There are two types of **Radius Rasp**: The white handled **RR-1 'Original'** with a perforated 'shaving' blade and the black-handled **RR-2 PRO** with a standard type rasping blade. Both versions are used in the same manner to round the outer edge of the hoof wall into the protective arc of the Mustang Roll. But each type has a different purpose.



Both **Radius Rasps** have the same secure-grip handle with finger grooves that allows you to drive the rasp forward with the heel of your hand. This creates effective, one-handed rasping. Both blades work best if you use many fast strokes with relatively light downward pressure on the hoof wall.



Applying the Radius Rasp:

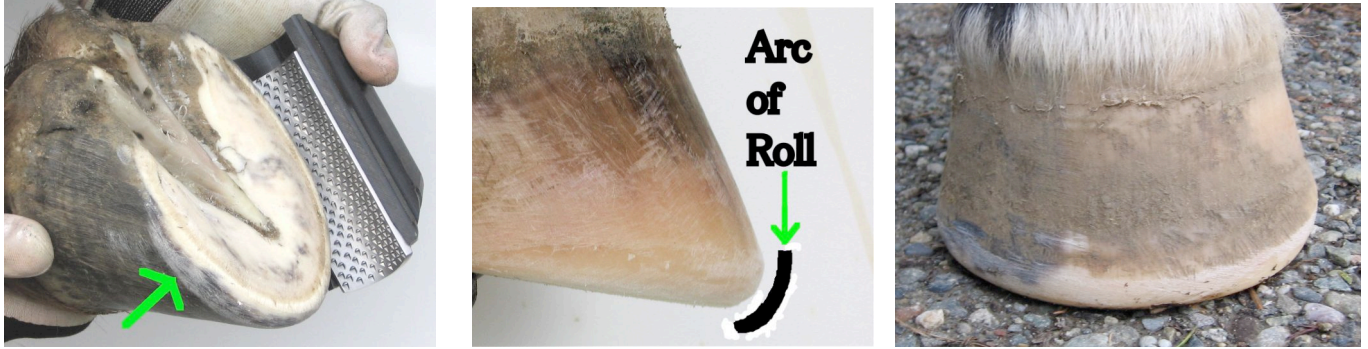
When your Radius Rasp is new it will be very sharp and can 'chatter' a bit as you use it. Glide it gently at first and after a few horses it will move more smoothly. As the blade eventually begins to dull it will take more effort to push it. But don't throw that blade away yet because it actually creates an even smoother finish to the hoof wall as the teeth wear down. The black **RR-2 "PRO"** has a coarser blade that works best for removing harder outer layers of horn and 'roughing in' the arc of the mustang roll. The white **RR-1 'Original'** has a perforated 'shaving' blade that makes a smoother finish". So you use them in sequence: first the black **RR-2** and then the white **RR-1**. Both rasps work best if you push them forward in a gliding motion, not downward against the hoof. Use many lighter rapid strokes and move the rasp in a spiral arc, changing the angle of your stroke as you move around the hoof.

1. Make multiple passes around the wall—in both directions, heel to toe and toe to heel.
2. Rotate the rasp in a spiral arc across the wall surface—twist your wrist as you push
3. Use all parts of the blade—both of the outer edges as well as the center portion.
4. Use both hands, separately and together—you can both 'push' and 'pull' the rasp
5. Be sure to rasp well above the bearing surface of the wall around its outer edge.

Shave more horn off the thicker portion of the wall across its toe area than at the quarters and heels. Round the wall at least ¼" up along its outer surface at the toe and at least 1/8" toward the heels—this avoids pressures that crack and flare the outer layers of hoof walls. But try to leave at least 1/8" of un-rounded wall to the outside of the white line. Use the 'feel test' to evaluate the smoothness of your radius by running your fingertips around it, noticing any flat parts or sharp edges the need rounding and blending.

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Apply the Radius Rasp blade to the outer edge of the wall to extend the arc upward:

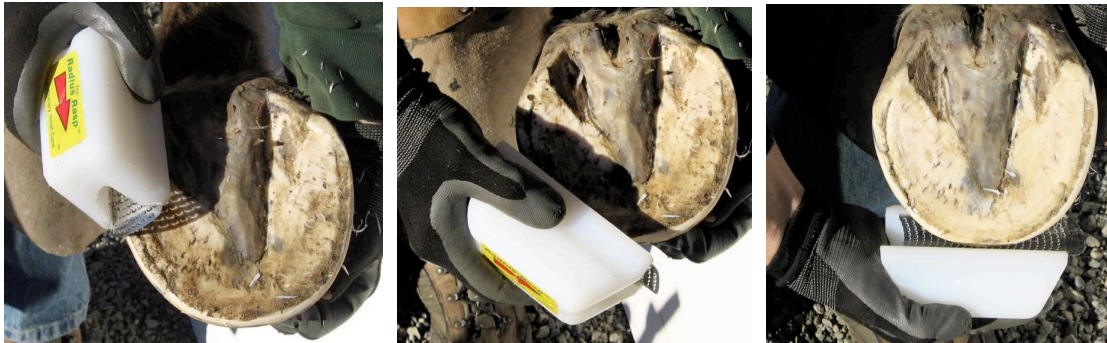


Push and Pull the **Radius Rasp**, using it in both hands:



Move the rasp in a spiral arc around the hoof wall, twisting your wrist as you go. Begin on one edge then rotate it across to the other edge of the radius as you glide it forward:

1. 2. 3.



Use the full width of the blade to work all parts of the hoof wall:
Outer wall: Mid-wall: Inner wall:



Mid blade to mid-arc of wall:



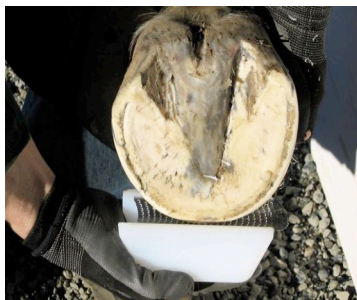
Mid blade to upper arc:



Edge of blade to outer wall:



Rounding pointed toes:



Rounding-off flares:



Using two hands:



Use the full width of the curved blade:



Using the 'Feel Test':

Run your finger over the arc of the hoof wall to locate flat spots and sharp edges



Remember: Push & glide the rasp across the wall. Pressing hard against the hoof can shorten the useful life of the RR-1's perforated blade! Make more strokes with lighter pressure.

The Radius Rasps and Hoof Stands

Using a hoof stand can give you better access to the outer hoof wall and provides solid support for the hoof as you work its edge with the rasp.



Using the Radius Rasp's powerful magnet

The magnet conveniently attaches it to any steel hoof stand



Radius Rasps on the Evolutionary Hoof Care Work Station Tool Caddies:



If your hoof stand is not made of steel, mount a small plate of thin steel to it with two screws, to which the **Radius Rasp** magnet can attach.

Replacing the Radius Rasp Blades

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Changing the Perforated Blade on the RR-1 'Original'

To remove it, hold the handle firmly in one hand, then grasp the rounded front end of blade with pliers and pull straight back. To install a blade, slide one edge of the new blade into the groove on one side of the handle. *Orient the cutting teeth upward* and the pointed ends of the rear of the blade toward the closed ends of the blade grooves. Then push down with thumbs or fingers on the opposite side of the blade until it snaps into its groove. Check to see that both edges of the blade are completely seated in the handle grooves.

Removing blade w/ pliers:



Slide edge of new blade in one slot of the handle:

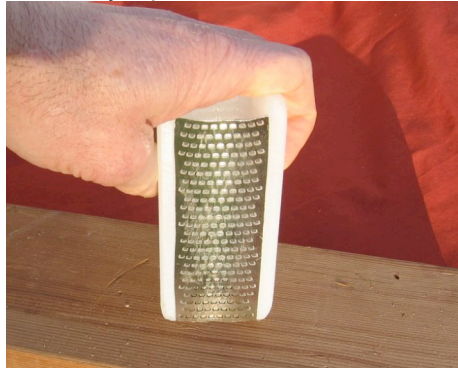


Seating the blade in both grooves

Snap opposite edge of blade into groove:



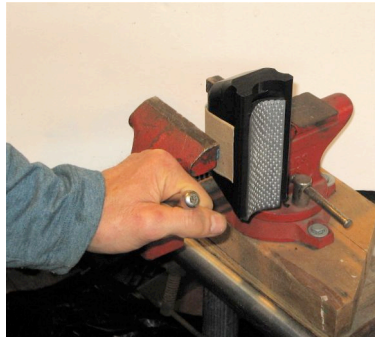
Gently tap rounded front end on board:



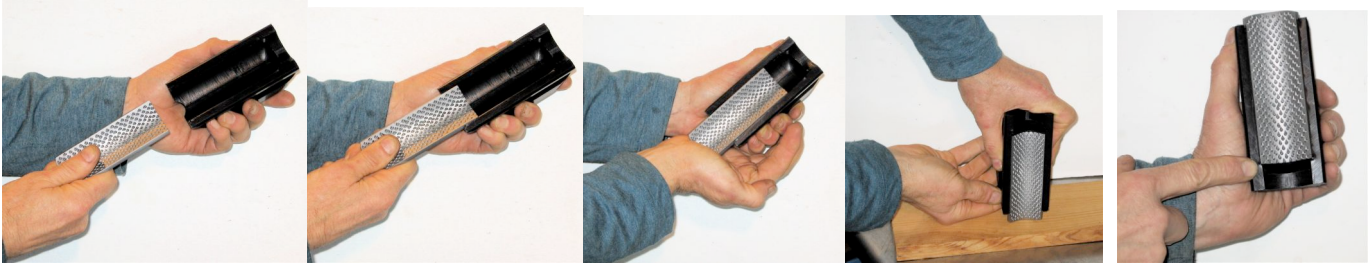
Be sure the pointed ends of the rear of the blade are inside not behind the blade grooves! If the pointed ends of the blade are behind the ends of the grooves, remove the blade with pliers and try again: the entire edge of the blade must be seated in the groove.

Changing the Solid Blade on the RR-2 PRO

To replace the blade in the RR handle, wrap the handle in a piece of cardboard then clamp it firmly in a vise: Next use a hammer and a flat screw driver or metal bar to gently drive the blade out of the handle:

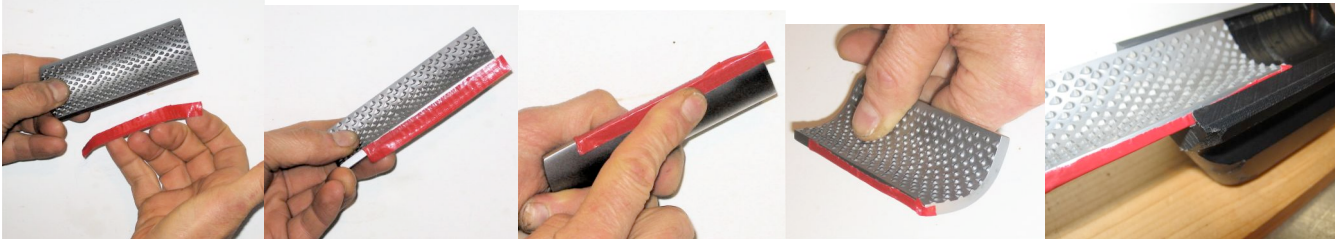


To insert a new blade into the **RR-2** handle, insert the flat end of the blade into the blade grooves and push the blade inward. To fully seat the blade you can push it against a hard surface, like a board. If necessary, use a hammer to gently tap the blade in to the handle. The blade is fully seated when the corners of the flat end reach the curved ends of the blade grooves:



Tightening the Blade Fit in the RR-2 Handle:

After using more than one blade in the 'PRO' handle, the plastic might stretch slightly, causing the blade to become loose. To tighten the blade fit, place a narrow strip of tape along one edge of the blade. Fold the end of the tape over the corner of the flat end of the blade. Then insert that end into the blade grooves of the handle. Use a strip of duct tape or electrical tape that is about 1/2" wide. Fold the end of the tape over the corner of the rasp to keep it in place as you insert the flat end of the rasp into the blade grooves:



Don't Forget to Use the Hoof Buffer!

After creating your Mustang Roll with the **Radius Rasps**, follow up with use of the **Hoof Buffer** contour sanders to produce a perfectly smooth, blended surface. This 1 – 2 – 3 combination will create the most durable hoof wall profile possible.



See videos of all our tools in use online

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Give your horse the most durable hooves Nature has made possible

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<http://www.evohoofcare.com>

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