

The Hornbeam Advantage in Quality Piano Action Parts by Renner USA

A Little Known Secret

One of the little known secrets of Renner action parts is the use of a special wood called Weissbuche - Hornbeam in English - which is naturally air-dried and aged over several years.

The use of only the finest quality materials, including the famous Renner bushing cloth, are among the many reasons why genuine Renner parts are preferred by the world's finest quality piano makers and rebuilders.

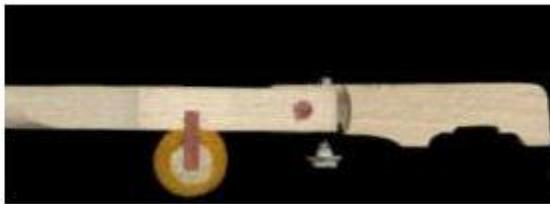
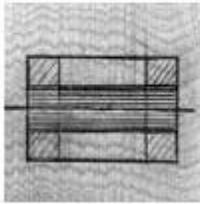


Why Is Hornbeam So Superior?

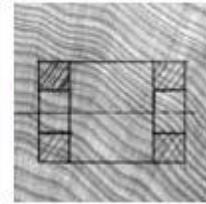
First, we wish to make clear that both Maple and Hornbeam are acceptable for making action parts when used appropriately, with very special attention being paid to proper wood selection, seasoning, and grain direction.

However, having developed and supplied special action parts to the world's great piano makers for over 100 years, Renner has found Hornbeam to have significant advantages because it is more dense in structure, and scores measurably higher in bending strength and hardness tests over Maple.

Hornbeam

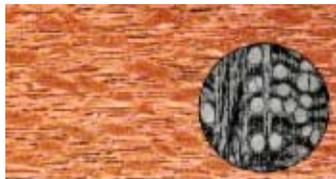


Maple



While we will manufacture to each customer's own specifications, we recommend Hornbeam, and Renner USA uses Hornbeam exclusively for the following reasons:

The enormous bending strength of Hornbeam -- about 32% higher than Maple -- has a particular advantage for hammershanks. There is less warping or back springing when the hammer attacks. This means a better energy transmission of the hammerhead when attacking the string. The greater bending strength of Hornbeam also reduces the sliding and rubbing movement of the hammerhead against the strings when the shank is under tremendous torque during the attack - the benefit of which is a decreased wear and tear of the hammerhead felt. Another important benefit of the increased bending strength is less re-travelling of the hammers.

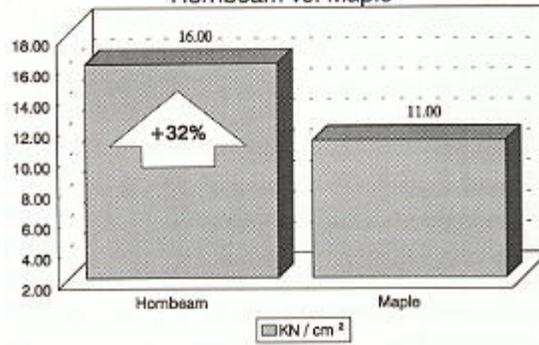


Hornbeam Cross-Section

The use of Hornbeam, with our special bushing felt, are important factors in producing the superior bushing centers in Renner action parts. The grain direction of the much denser Hornbeam is chosen in such a way that the flange bushing centers have an optimum position towards this direction. This guarantees an enormous strength in the section of the two bearings within the flange, as the center will have a better fit when it is pressed directly into the wood in this direction (e.g. for whippens, underlevers, etc.). Also, the pressure put on the center can be increased by 23% when using hornbeam, instead of Maple, before it will remove within the wooden part.

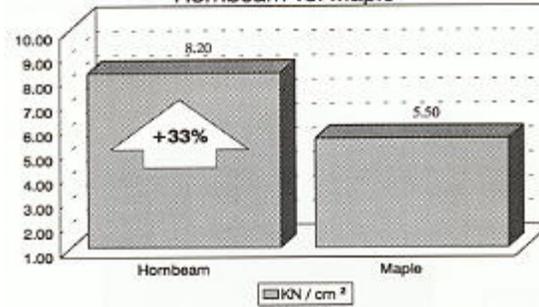
Bending Strength

Hornbeam vs. Maple



Tensile Strength

Hornbeam vs. Maple



Hardness

Hornbeam vs. Maple

