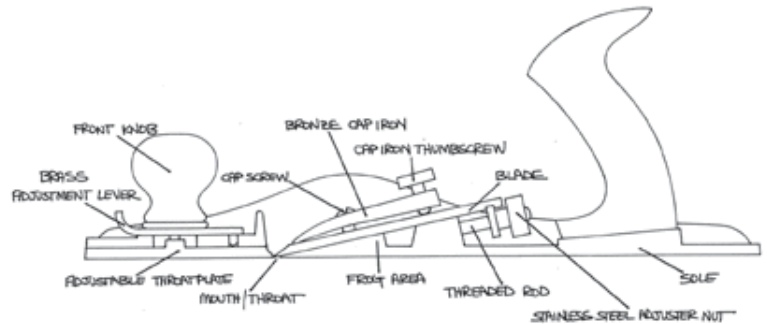


Lie-Nielsen Toolworks Product - Use and Care Instructions

Low Angle Jack Plane

The Lie-Nielsen Low Angle Jack Plane is based on the Stanley No. 62, one of the three large-format low angle block planes that Stanley made. At 14" long, the 62 was the largest. It was produced between 1905 and 1942*. It is often referred to as a butcher's block plane, giving you an idea of one use it was designed for. It features an adjustable mouth and a 12° blade angle in a full-size bench plane scale. The 62 is useful in a wide variety of jobs, from rough work to smoothing, and our version with the 3/16" blade and heavy Ductile Iron body casting is an outstanding performer.



For the best finishes, use a very sharp blade set to take a fine cut. The mouth opening should be no larger than necessary to pass the chip. When you want to cut more aggressively, open the mouth more and advance the blade for a deeper cut. For best results on end grain, set the blade and mouth fine.

Geometry: The blade sits in the body at 12°. It comes with a 25° flat ground bevel, making the included cutting angle 37°.

Blade Sharpening: The blade comes ready to use. Slight additional honing will increase performance. We recommend a secondary bevel of 1° or 2°. This is most easily accomplished with a good honing guide, and will improve performance especially in hard woods. Further modifications of the bevel angles can be made to suit your style and the work.

Mouth Adjustment: Hold the tool in one hand and loosen the front knob about 1/4 turn. Adjust with the brass lever. Tighten the knob again firmly, but do not overtighten.

Blade Adjustment: Blade adjustment is simple, direct and positive. Hold the tool in one hand with your thumb on the cap. Loosen the cap iron thumbscrew all the way, then tighten slightly until there is a little resistance. Adjust depth of cut with the stainless steel nut. Sight down the base of the tool from the front and judge depth and squareness of blade by the thin dark line of the blade showing against the sole as it protrudes. When you are done, snug the cap thumbscrew. Do not overtighten. Make sure the mouth is adequately open before advancing the blade to avoid damaging the edge.

Lateral Adjustment: The Low Angle Jack Plane intentionally has very little lateral adjustment of the blade. This is an advantage. As you adjust the blade, it will track squarely with the sole. The disadvantage is that you must sharpen the blade square. Today there are many good jigs on the market that make this easy to do. If you find that you don't like this feature, you can grind the

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blade narrower to give more lateral play.

Materials: The body is cast from Ductile Iron, a very strong alloy that will take a lot of abuse. These castings are fully stress-relieved, a process that removes inherent stresses and ensures that the tool will remain flat and true. The cap is Manganese Bronze. Other parts are Brass, Steel and Cherry. The blade is 3/16". A-2 cryogenically treated Tool Steel, double tempered to Rockwell 60-62. Our heat treating technique ensures that the blade will take and hold a very fine edge for a long time. After heat treating, the blade is fully surface ground on the top, back and cutting edge, giving a smooth flat surface that will take a mirror finish very quickly. The thick blade provides solid chatter-free cutting.

Maintenance: The sole is ground flat to .0015" or less. Occasional hand lapping with fine wet/dry sandpaper (320 grit or higher) on a flat surface like a glass plate, will help remove dings and keep it true. The cap iron can be polished with any good brass polish, or allowed to patina with age and use. Occasionally, the tool should be disassembled, cleaned, and moving parts oiled. The blade should be kept lightly oiled to prevent rust, especially when the tool is not in use. Waxing the body will help protect it from rust. In our shop, we use a fine abrasive handblock (available from us) to remove light surface oxide from body or blade.

*Alvin Sellins, The Stanley Plane, The Early American Industries Association, 1975