

Hammer B3 Tablesaw / Shaper Review

Genesis

Due to some space constraints and the desire for a larger sliding table I began looking for a replacement for my Delta Unisaw. My search initially led me to consult the Delta industrial catalog but to my dismay I found that the Unisaw is for all intents and purposes the “top-end” of their equipment. I also found this same situation regarding other domestic brands as well as importers like Jet.

My search then led me to machines made in Europe. There were several brands imported to these shores to select from. I eventually settled on the Hammer brand based upon my assumption that it had the best value for capability and because of its relatively small footprint. I decided to get a combination saw / shaper to solve my shop space issues.

The dealer configures a machine specifically to an order. I ordered my machine equipped with:

- 3hp single phase motors (2)
- 78" sliding table with outrigger
- Rip fence capacity of 49"
- Scoring saw

My expectations for the Hammer were derived from a Delta Unisaw users perspective - in essence, I was expecting a machine that was measurably better than Unisaw grade equipment in every regard.

Customer Service

A problem I had when talking to the dealer was getting a good quote prior to placing the order. It took some time to get a proper quote and accurate shipping cost. When I ordered my machine I was told to expect it in three months, it actually took four.

After wiring the unit I found that it did not start. After several hours on the phone with the dealer and a few calendar days, an internal wiring error was discovered. Had I not discovered and fixed the problem, the dealer appeared to be willing to send a repairman out to fix the machine at some considerable expense to themselves.

Safety

One reason I was attracted to a European machine was the promise of increased safety. The sliding table imparts the greatest increase in safety by allowing the operator to more easily operate the machine while standing further from the cutters.

Due to problems with the riving knife, this particular item (as delivered) was rendered only about as good as the splitters used on cabinet saws. The concept is better, it's an implementation problem.



The saw guard (in reality a dust hood) performs quite well and since it doesn't interfere much, it is more likely to be used than the cabinet saw equivalents.

The brake function also increases safety by reducing the temptation to remove stock near the blade while it's spinning. The brake will stop a 10" blade in 3 seconds; larger blades takes about 6 seconds.

The opening around the saw blade is larger than the throat plate on a cabinet saw and it is beveled on the right side. This allows small off-cuts to fall into the gap. The leading edge of the blade can also catch an off-cut and unexpectedly propel it into the cabinet or even on trajectories outside the cabinet! A zero clearance throat plate mostly solves this problem but they are harder to make for this machine than other saws.

Documentation

The owner's manual is measurably deficient in assembly and alignment information as compared to similar Delta owners manuals. As one example of this, there are only 10 sentences in the manual describing how to align the B3. Including the options installed on my machine; there are 8 major machine features that need to have an alignment procedure.

The documentation as supplied is not adequate in itself to enable the owner to fine tune the machine alignment. This I believe is a major failing on the part of Hammer.

Tablesaw Function

The saw is quite LOUD, much more so than the Unisaw it replaced. I measured the blade flange run-out, it was essentially zero.

Compared to the jump-start typical of cabinet saws, the Hammer uses a soft start feature, it takes about 5 seconds to spool the blade up to operating speed.

The saw trunion and motor mount are totally different than what is used on any contractor or cabinet saw design. Basically everything is mounted off of a hinged plate that is

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bolted to the underside of the iron table by two small bearing blocks. I've noticed that there is some "loosness" in the movement of the trunion when setting an angle. Although the movement isn't as "fluid" as a cabinet saw, I've not experienced any detrimental side effects due to it; angle settings are true, accurate, and repeatable.

Many of the other Euro saws imported to the US are equipped with a 5/8" arbor but the Hammer line is not; it uses a European 30mm arbor which means standard American blades cannot be used without modification. It is fairly typical of Euro saws not to be able to use a dado blade and this unit is no exception. Blade changes are actually a little easier than on a typical cabinet saw.

With a 10" blade the maximum depth of cut is 2.75", considerably less than a 10" cabinet saw. With a larger 315mm blade the maximum depth is 4". The blade spins 20% faster than normal due to the line frequency, I think this produces more noise and has a detrimental effect upon the quality of the cut. With a 12"+ blade fitted I noticed a visible "wobble" in the blade which I believe is the cause of the poor crosscutting performance. The 10" blade was rock-solid though.

I've used both the triangle type and B3L type rip fences on this machine. In a nutshell, both are EXCEPTIONALLY POOR and TOTALLY UNSUITABLE for any saw costing over three hundred dollars! The triangle type is just down right UNSAFE. For the price and hype of this machine one would expect something of at least average quality and performance but this is not the case. Any of the aftermarket rip fences commonly available is tremendously head and shoulders above these designs in quality, usability, and performance.

The scoring saw on this machine is driven via a pulley from the main saw motor. After some setup I found that I could produce good results. I did not achieve 100% chip-free cuts all of the time but it was certainly much better than I could have done on a cabinet saw without scoring.

The scoring blade width is adjusted by means of three different sized shims that came with the blade. The side to side alignment and blade height adjustments are made via bolts accessed from holes in the saw top. I had expected that the scoring blade raise control would be somewhat inconvenient but have not found it to be so. The maximum diameter main blade with scoring fitted is 10". To use a larger main blade the scoring blade must be removed.

The main electrical controls are located on the front side of the main cabinet. The switchgear is not as conveniently located as those found on cabinet saws. The main disconnect switch is

located on the back of the machine far away from the main controls.

Hammer uses a single removable crank handle for cutter raise / tilt versus the dedicated crank wheels used on competitive equipment. The blade raise function is a little stiff and induces some flex in the plastic handle; this imparts a "cheap" image to an otherwise sturdy machine. All other raise / tilt functions work well with the handle.

For blade angle, the resolution is fairly fine at 39.25 turns for 45 degrees. For blade raise the resolution is more coarse at about 4 turns per 1" of blade raise. The blade raise requires more effort when compared to a cabinet or contractor saw.

Noticeably absent from the saw is a blade height lock. There is a lock for blade angle. I've never experienced any ill effects due to the lack of the height lock.

The table surface is milled, not ground like a typical Delta or even Grizzly; it looks somewhat unfinished but has no detrimental effect in use. My iron table has an area about the size of a hand that is dished down by about 0.007" in the center, otherwise it is flat.

The iron table has 15 small diameter holes in it; only five are required for use from the top, the multiple holes looks a little chintzy. Unlike typical cabinet saws, the B3 does not have a leading edge bevel on the iron table.

The extension table is made of four thick painted metal sections attached to the rip fence guide rails and supported by a cabinet extension assembled by the user. The metal table provides a sturdy surface however the sections must be individually aligned with the iron table in order for the incredibly inferior Hammer rip fence to slide over them smoothly.

Shaper Function

The shaper is fairly quiet especially compared to the saw. One unique feature of the Hammer / Felder equipment is the rearward tilting shaper spindle. This feature introduces a capability not routinely found in stand-alone machines.

I measured the spindle run-out to be essentially zero. On the 3/4" spindle I have, the spacers are 1 15/16" in diameter, these can limit the use of some small diameter - deep profile cutters. The center of the spindle is about 6.3 inches away from the sliding table.

Both the aluminum infeed and outfeed fences can be offset as well as closed or opened. The faces can be deformed a little if tightened down too much.

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Changing the belt position on a three-step pulley controls the shaper speed and it is easy and quick to do so. Like the saw, the shaper is equipped with a soft start and brake function. One major drawback to the Hammer is that the shaper does not come with a reverse switch.

The shaper shares the ON switch with the saw and is located somewhat inconveniently on the front of the machine; however, there is a stop switch that is easily reached on working side of the shaper.

The resolution for the angle adjustment is fine at 38.5 turns for 45 degrees of angle. The resolution for spindle raise is fine also at 12 turns per 1" of raise.

On my machine the crank handle interferes with the tilting feeder bracket when the spindle is at 90 degrees. This is an obvious design flaw and will cause some inconvenience.

Dust Collection

It may not seem like it from the dust remaining inside the cabinet but I estimate that the dust collection is actually getting about 95% of the dust from the saw blade. The goal of a dust-free cabinet is still not achieved; but it's pretty good. The saw guard does improve dust collection measurably with a shop-vac attached and keeps chips from being thrown at the operator.

For the shaper, dust collection is acceptable with the spindle set at 90 degrees. With the spindle set at an angle, chips tend to be thrown into the cabinet. The shaper trunion has brushes intended to fill the gaps. However these brushes take a set and when the spindle is moved, the cutter will propel a lot of chips into this gap.

Sliding Table and Outrigger

The sliding table is what makes these Euro machines great. They have much greater capacity than any aftermarket attachment and operate much closer to the sawblade. On my 78" slider, the cut capacity with scoring is 68". The maximum size piece this unit will crosscut without scoring is 72". The slider is long and can get in the way sometimes, however, I do think the basic format of this type of slider is superior and worth the trade-off.

On the Hammer there is one T-slot track in the sliding table with can be used to attach clamps, jigs, and the standard crosscut fence; this system is superior to the normal miter gauge slots in a cabinet saw or shaper since the whole sliding table can be used as a jig base.

The crosscut fence on the outrigger is sturdy, straight, easy to align, easy and fast to remove, and maintains its alignment when removed and replaced. I have found the stop block to be

a little disappointing in that it doesn't glide as well as others I've used and the fence clamp handles interfere with the stop clamp knob on occasion.

The European sliding table saws are optimized to operate in the "fence forward" position. Although the outrigger table can be positioned elsewhere, the fence (with the outrigger) cannot be positioned in a more American "fence aft" configuration without running into either saw blade access, outrigger support limit, or slider stroke limitations. Without running into any of these limits, the maximum fence aft position yields a 29.5" crosscut capacity (10" blade) or 25.5" with scoring.

The outrigger is a pivoting support to hold up the table attached to the sliding wagon. Although the machine can be operated without the outrigger it is very handy when cross cutting sheet goods. Even with a heavy load, the sliding table action is smooth and accurate.

Summary

The changeover to a European type machine does take some time to get used to but the basic design of the machine is generally superior to traditional stand-alone machines. The Hammer B3 is a much better platform than a cabinet saw could ever be, the only thing that I miss is the ability to use a dado cutter. By including a tilting spindle shaper into the machine, the capability and convenience of this "core" power tool of the woodworking shop is greatly enhanced.

The overall fit and finish of the Hammer is roughly equivalent to more common Delta machines, due to the marketing hype I was expecting a little better but in reality, "Delta" class quality is still pretty good. The Hammer uses less plastic and the sheet metal is much thicker and it is generally more robust. Contrasting with that however, is my opinion that the Hammer could have benefited from a little more attention to design detail, especially considering the cost.

The following are what I view as the primary high points of the machine:

- Sliding table and outrigger
- Tilting shaper
- Scoring

The following are what I view as the primary low points of the machine:

- Vastly inferior rip fence
- Inability to use a dado cutter
- No shaper reverse
- Riving knife alignment
- Tilting feeder bracket interference