



WHAT YOU SHOULD KNOW BEFORE BUYING AN INDUSTRIAL SEWING MACHINE

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I've been sewing off and on since I was a kid, and I really started to get into it about ten years ago. Even though I technically outgrew my little 3/4 size domestic machine pretty quickly, I kept using it because it always did whatever I asked it to. I even made my first backpack on it before deciding it was time for something bigger. Don't ask me how I managed to not kill that machine, because I have no idea.

Last year, I got a so-called heavy duty Singer that claims to have 50% more power than a standard domestic machine. This bad boy will make purses and backpacks with ease, I thought. And it does. Well, most of the time.

I found its limits when I tried to make a bag out of thick upholstery material. And honestly, when it comes down to finishing most bags — sewing the thickest and most difficult seams — the machine often lifts up from the table on the end opposite the needle.

What I really need is an industrial sewing machine. Not to replace the Singer at all, but to complement it. I can totally justify this purchase. Let me tell you why.

SO, WHAT'S THE DIFFERENCE?

A domestic sewing machine is kind of like the family car in that it can do a variety of things pretty well. It hauls the kids, it's a good grocery getter, and the gas mileage is decent. You can probably get it in and out of the garage with no problem. Domestic machines, especially modern computerized ones, are all-purpose in this way. They come with anywhere from a handful to hundreds of different stitches, both functional and decorative.

An industrial machine is more like a semi. It's big, it's heavy, and it has one major purpose: being heavy duty for whatever you need it to do. The comparison ends there, however, because industrial machines run terribly fast from a dead stop, unlike semis.

Domestic machines used to be built into cabinets or hard-sided carrying cases for the most part, but today they are generally more portable. On the other hand, industrial machines are flush-built into sturdy adjustable tables, and they always have been.

The biggest consideration for getting an industrial machine is their size. An industrial will definitely take up more space than the average domestic, and it is much heavier. I've seen some machines with tables on casters, and some that are meant to be bolted to the floor of a factory. Either way, I'll have to do some serious rearranging in my sewing room to make space for an industrial, including leaving myself some room to work.



Left: a 3/4 size Janome 11706. Right: a full-size Singer Heavy Duty 4452.



A Juki industrial machine. Image via [Juki](#)

Under the Hood vs. Under the Table

The motor in a domestic is about the size of my fist, and is located inside the machine. Industrials have a much larger motor that sits outside the machine and is bolted to the underside of the table. These machines are built for constant use, day in and day out. **They are set up for a single purpose**, which is often (and will be in my case) a single-needle, straight stitch with a walking foot. Others are set up to do a zig-zag stitch for stretchy seams, or a blind hem, or they might have a twin-needle and are set up to stitch the **flat felled seams** on hundreds of pairs of jeans a day.

Older industrial machines have clutch motors. They are fast, loud, and run continuously when powered on. The video below explains them rather nicely. Newer industrial machines have servo motors that offer much finer control, can sew either slowly or quickly, and are really quiet compared to clutch motors, or even the little fist-sized motors inside of domestics. However, I've been warned that they might not last as long as a clutch motor. To that I say meh, because a replacement is only about \$100, and it should be easy to switch out old for new.

Industrial Sewing Machine Clutch Motor - Components Operation Wiring Diagram



WHAT IS IT GOOD FOR?

One can do quite a bit with a domestic machine, especially if it's an older one. Like most things from 60-70 years ago, they're just built better. Want to make your own clothes? Unless we're talking about denim coveralls and leather coats, you're probably fine with a domestic.

Do you want to work with leather or canvas? Repair boat sails? Reupholster the seats in your Airstream? Don't bring a knife

to a gun fight. You need an industrial sewing machine. While you might find a domestic that can go through thin leather or canvas, it will only become a point of frustration when your seams start to stack up. Like many other things in life, you should use the right tool for the job.

Here's the thing about industrials: they aren't all for heavy-duty fabrics, although that's the sort of industrial that I'm after. I want an industrial because of the muscle, and because of the seemingly endless list of materials I could sew with a heavy-duty model. I've made a lot of bags from old shower curtains and tablecloths with pretty good success, but I want to do more with upholstery material and leather, both of which are heavier and harder to sew through.



We barely made it through this one on the Singer 4452.

Advantages

- **Durability.** Industrial machines are built to run all the time for many years. Who wouldn't want that?
- **Speed.** Whether clutch or servo motor, these machines are *fast*. Some go as high as 5,000 RPM.
- **Permanence.** There's no putting the machine away when you're not using it. This is heavy equipment!
- **Automatic features.** Some industrials will cut the threads for you (yes, please!).
- **Quiet**, if it has a servo motor.
- **Upgrade-able.** Love the machine, but hate the table? Should be a one-for-one swap. Same with the motor — **it might even use the same mounting holes as the original.**

Disadvantages

- **Limited feature set.** But this is what I want. I have my Singer domestics to do the fancy stitches.
- **Heavy**, hard to move, with a larger footprint. It'll be rough rearranging my room, but it's worth it.
- **Noisy**, if it has a clutch motor. I would love the chance to upgrade to a servo motor and hear the difference.
- **Threading.** Setting up the threads will be different from a domestic, and perhaps less straightforward.
- **Energy-efficiency.** Clutch motors are less energy-efficient than servo motors because they run all the time.

OLD MACHINES: MAINTENANCE AND UPGRADES

If you're like me (and I think you might be), you're attracted to older machines the same way you might be drawn to, say, a

60s car rather than a 90s car for your first project. You figure, I'll pay less than I would for a new one, it's almost guaranteed to be more rugged, and I won't freak out about every little scratch and ding like I would if I bought a new one.

On the other hand, a new one is new. It will come with all of its intended accessories and possibly a warranty of some kind. Its modernity will mean a better resale value if you decide that what you really want is a post-bed industrial machine so you can try your hand at making shoes.

If you can find an old mid-century industrial machine, you're more than likely going to get your money's worth. After cleaning, oiling, and greasing it, you'll probably want to upgrade a few things like the built-in light, the foot pedal's connection to the motor, and even the motor itself. And your machine might need something small but important, like a new belt.

NO SOUL IN A NEW MACHINE?

I'm not saying that. But don't be shy about seeking out an older machine on Craigslist or something similar if you're not afraid of a little bit of upfront work. By older, I mean 1950s or 1960s. If you do want a new industrial, they're not hard to find. You can get a new Juki from the Bezos Barn for under a grand, or a Sailrite from their site for about twice that much. There's probably a sewing machine dealer in your town where you could go and try them out. And even if you can't do that, there are plenty of bag makers and leather workers out there who have made [videos about their machines](#) and why they got them, so watch a couple of those before you decide what's best for you. That's what I'm doing.



A Mitsubishi DU-105 industrial sewing machine. Image via [Leather Worker](#)

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