



COIL LINE BUYER'S GUIDE

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ABOUT THIS GUIDE



Coil lines are driving new ways of thinking about duct fabrication and contributing to significant change in the duct fabrication industry. For over 30 years we have helped buyers find the perfect coil lines for their needs, enabling companies to improve their HVAC operations and productivity. However, the addition of a coil line to your shop is no longer just about keeping up with production or improving your workflow.

Technological advancements, such as new longitudinal seaming technology or inline plasma cutting, are allowing for more efficient prefabrication and improved quality control. The digitization of large projects contributes further to an increasingly efficient and centralized duct fabrication process.

The future of duct fabrication is approaching quickly. After guiding many customers through their purchase decision, we have outlined the most common information that we've been asked about over the years. This buyer's guide provides you with the crucial topics you need to consider before investing in a coil line.

EVALUATE YOUR CURRENT PRODUCTION VOLUME

HOW MUCH DO YOU PROCESS ANNUALLY?

The first step in determining whether a coil line is the right investment for your sheet metal fabrication process is to evaluate the volume of straight duct and fittings your shop is producing. Coil lines are meant to facilitate straight ducts. If your shop's output includes a large portion of duct fittings, you should prioritize having the complimentary equipment listed below.

Next, analyze how much sheet metal you are currently processing. If you are utilizing more than 100,000 lbs of sheet metal annually, a coil line may be a worthwhile investment. Coil

lines can help increase production efficiency and reduce labour costs, making them a smart investment for companies that process large volumes of sheet metal.

PREPARATION & PLANNING

It's important to note that shops may spend several months, or even years, planning and preparing for the addition of a coil line in their shop. Coil lines are very large pieces of equipment that will significantly increase your throughput. Careful consideration and planning are required to ensure your shop

has the capacity to invest in this type of equipment, especially if you are planning to conduct prefabrication in your shop. Prefabrication requires a significant amount of assembly and storage space.



EQUIPMENT REQUIRED PRIOR TO INVESTING IN A COIL LINE

If you're considering investing in a coil line, it's likely the following machinery is currently fabricating all of your ductwork (straight duct sections and fittings), and you're ready for a coil line to fully automate your straight duct fabrication. Once you purchase a coil line, these machines should be reallocated throughout your shop to produce your fittings exclusively.

- 1. Duct Beader** A duct beader is used to create beads in the sheet metal, which helps to increase the strength and rigidity of the ductwork. This can be particularly useful for larger commercial projects where the ductwork needs to be able to withstand higher air pressures. Using a duct beader also helps to reduce noise in the duct.
- 2. Plasma Table** A plasma table is used for cutting all duct fittings out of sheets of material using CNC software to program the cut list and nest it efficiently. This not only increases the quality of the materials but also helps to reduce scrap waste material.

Once you have a coil line in your shop, positioning the plasma table in a location where blank sheets can be effectively moved from the coil line and stored nearby is something to consider.

- 3. TDC/TDF Wrap Brake for T25 A and B** A TDF Wrap Brake is also a valuable piece of equipment to consider. This machine bends square duct into L section or full wrap duct that's already had the TDC/TDF flange rollformed onto it. This can significantly reduce the time and effort required to create the ductwork.

ROLLFORMING EQUIPMENT

- 1. TDC/TDF Rollformer for T25 A and B** A transverse duct connection (TDC) or transverse duct flange (TDF) rollformer can be used in conjunction with a coil line to create the TDF or TDC flanges on the ductwork. These flanges are an essential part of the ductwork, and investing in a rollformer can help to increase the accuracy and consistency of the flanges.
- 2. Pittsburgh and Button Lock** A Pittsburgh machine and button lock are important for producing the longitudinal lock-seams on the ductwork to create airtight joints for leak prevention. They're particularly useful for creating larger commercial ductwork that requires a high level of precision and quality.

These machines are used in every shop. Once you have a coil line, they would move over to the fitting department and continue to be used for fitting fabrication.

For the metal fabricators cutting thicker material, the torch height distance is set through the CNC and is maintained via Ohmic Sensing. This sensing system enables the torch to detect and adjust for variances in material thickness as the plasma is cutting, creating an incredibly responsive cutting process.

Whether you already have most or all of this equipment in your shop, or your shop is growing and you’re still acquiring these machines, they’re all essential to understanding the variety of work that a coil line will produce.

Except for a notcher, a coil line would not replace any of these machines. They can each be used in conjunction with a coil line to bring your output, productivity, and quality of work to the next level. We have extensive experience helping shop owners carefully rearrange their shop floor plan to accommodate a coil line in order to ensure the best ROI for their business.

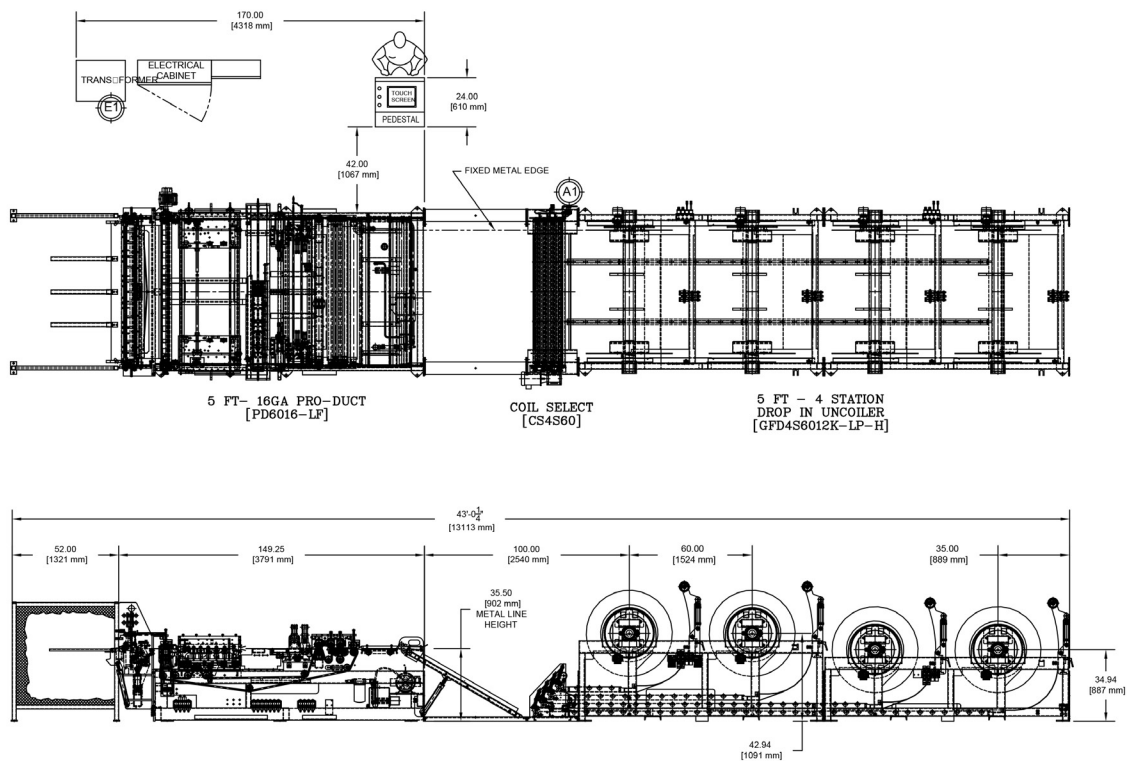
FUTURE NEEDS

When considering automation options for your coil line, it’s important to keep your growth trajectory in mind. Do you expect your company to grow soon? Do you expect your capacity to increase? These are critical questions you need to ask yourself to determine which level of automation to invest in. As we say at Empire: buy for where you’re going, not where you are now.

Progressing to a full coil line takes time and planning. For example, even if your shop isn’t producing TDC/TDF commercial duct, a front-end coil line for residential work would still make sense. As your business grows and your shop takes on projects that require TDC/TDF, producing that ductwork with a rollformer is a logical next step. As you continue to grow, it would eventually make sense to add the rest of the coil line components to automate the production of TDC/TDF ductwork.

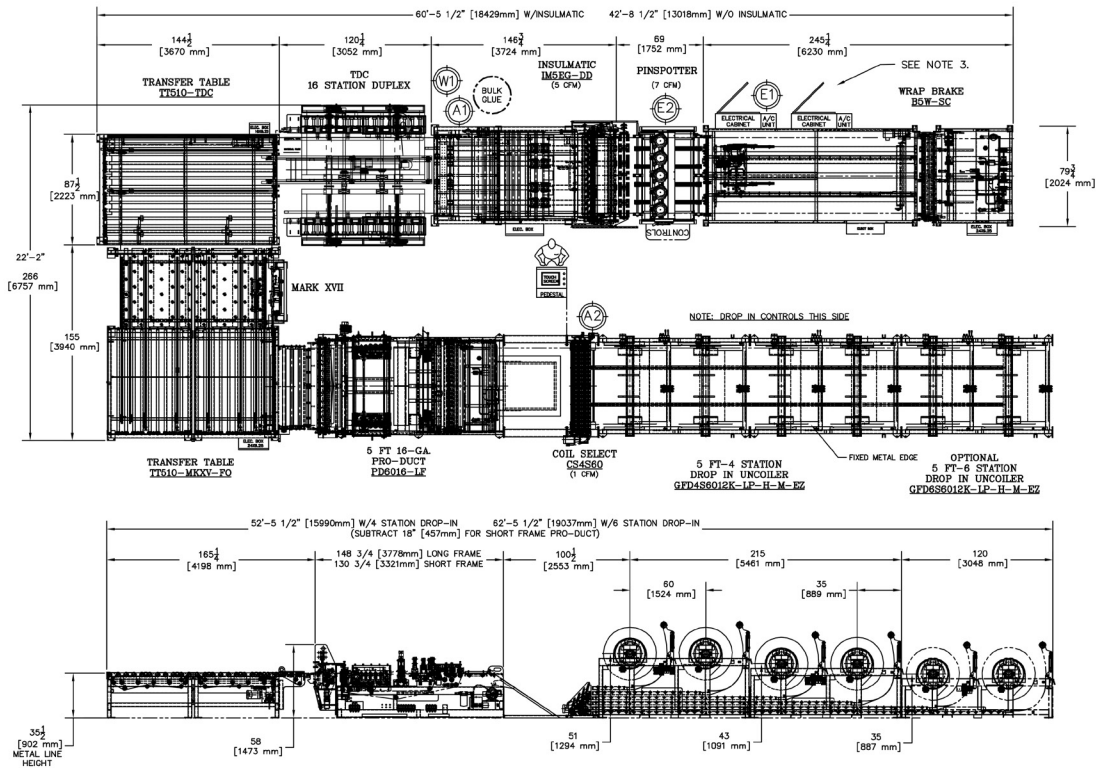
This process will look different for every shop, and is dependent on the market you serve, what you’re currently producing, and what your goals are for the future of your business.

Perhaps most importantly, consider the direction that the duct fabrication industry is headed. Advanced technology is enabling shops to eliminate secondary work on-site and minimize human error by significantly increasing their prefabrication capacity. Large mechanical contractors are already shipping ~ 40ft long duct work to job sites and utilizing paperless project management to track job progress in the shop and on site, helping to control costs and manage project timelines more effectively.



FLOOR SPACE & STORAGE CAPACITY

There are three major considerations regarding your shop floor layout and workflow to make before investing in a coil line. Shops often spend several months, if not years, planning and preparing for the addition of a coil line to ensure they have the means to handle the size and production volume of the machine.



1. **Floor Space** The amount of floor space required for a coil line depends on the size of the equipment and the production volume. A coil line is usually 60ft long by 7ft wide for a front end only, or 60ft long by 23ft wide for a full coil line, depending on your needs.

It is essential to ensure that you have enough space to accommodate the equipment from the outset.

2. **Staging Duct Work** In addition to floor space required for the machine; floor space meant for storing the completed duct work is important. An automated coil line will produce a completed piece of duct work every 12 to 14 seconds. Prefabrication of large pieces of duct work also require a significant amount of space in the shop. Therefore, detailed planning and organization is required to maintain an efficient workflow.

3. **Efficient Handling** Shops looking to invest in a coil line must consider if they have the means to move up to 10,000 lb coils. For many shops, upgrading to a forklift with a higher capacity may be required. Coils can be loaded on the machine by forklift or overhead crane.

It is also important to consider future production and prefabrication volume when determining how much floor space is required.

COMPLEMENTARY EQUIPMENT AVAILABLE

There are specific pieces of complimentary equipment to increase the efficiency of a coil line and get the most return on investment, to consider adding to your shop.

- 1. Corner Insertion Machine** Also known as a corner clincher, this machine is specifically designed to insert corners into rectangular ductwork, providing a fast and efficient way to create sturdy corners. By using a corner clincher in conjunction with a coil line, you can increase the speed and accuracy of your production process and reduce the need for manual labour.
- 2. Longitudinal Seam Closing – Whisper-Loc** The Whisper-Loc is used to create self-locking seams in the ductwork, eliminating the need for external fasteners and providing a more secure and airtight seal. By using a Whisper-Loc in conjunction with a coil line, you can significantly reduce the time and effort required to create these seams, resulting in a faster and more consistent production process.
- 3. Combo Corner Insertion and Seam Closing - Dual Head Cornermatic Whisperloc Combo Machine** A Dual Head Cornermatic Whisperloc Combo Machine combines the functionality of a corner clincher and a Whisper-Loc. The machine typically works by first cutting grooves into the ductwork, then uses a combination of heat and pressure to interlock the grooves, creating a strong and permanent joint.



SHOULD I BUY NEW OR USED?

Customers frequently inquire about making improvements to existing units to either add safety features or improve performance. These options can all be the right fit, depending on the situation. Here are some considerations to think about in your decision:

INVESTMENT

“What is the return on investment?” is often one of the most important questions in the buyers’ purchase decision, and understandably so – this is a large capital expenditure.

Investing in a used coil line offers short-term cost savings. However, there is significantly more efficient technology available in new models of coil lines. The loss of productivity due to an older coil line is often not worth the initial cost savings for a lot of businesses.

Given the technological advancements in newer models of coil lines, it’s often best to go with a new, high-quality unit right off the hop. Even though it’s a larger expense in the short term, it pays for itself in the long term, especially if it enables you to increase your capacity for prefabrication.

We often help customers make the decision to purchase brand new or opt for a higher quality used unit.

Another important factor is after-sales support. Where does it come from? What does it cost? Is the software proprietary to the machine tool builder or is support available elsewhere if needed? What can often appear to be a great deal at the outset can prove to have a less than favorable outcome down the road.

WARRANTY AND SUPPORT

New machines give some extra peace of mind with extended warranties, especially when you’re looking at a larger capital expenditure. Ensure that you’re clear on the warranty terms and length. It’s crucial to know exactly what the warranty covers, and this can vary greatly depending on the manufacturer.

Be sure to inquire about how support is provided when questions or issues come up. Can the vendor provide internet connectivity to the coil line for remote support to help reduce down-time? How quickly can parts be delivered? Is a staff member able to make the trip to your shop in a reasonable amount of time or help you out virtually?

When purchasing pre-owned, ask if there’s still support and parts available for the controls and find out what the cost and availability is for those parts. Like anything, over time the older technology is phased out for new technology, which can make finding replacement parts challenging and expensive.

TECHNOLOGY AND SOFTWARE

Consider the age of technology when looking at a pre-owned machine. Often the additional value that the latest technology offers in efficiency gains can outweigh the difference in price on a pre-owned machine.

Advancements in software and technology can often improve output and efficiency so much that you can make more money than what you could save on the initial investment.

POST-SALES SERVICE

Perhaps the most important factor to consider before purchasing a coil line is the company's reputation for providing exceptional service following the sale. Service is one of the criteria that matters the most – when you pick up the phone, you need to be reassured that someone on the other end will answer the call and provide solutions.

When issues arise, responsiveness from your vendor, supplier, or distributor is key. Companies that excel with post-sales service know that it's more than giving their customers peace of mind, it's about dollars and cents. Every time a machine is out of commission, your shop productivity decreases, and the

downtime costs eat away at your bottom line. When you're inquiring with different manufacturers or distributors, be sure to ask what kind of post-sales support is offered. These days, machine quality is extremely high, however, if issues do come up, it's important to know that you're in capable hands.

ABOUT EMPIRE MACHINERY

Serving Canada and the U.S. since 1987 Empire Machinery & Tools Ltd. in Winnipeg, Manitoba distributes quality new and used sheet metal equipment and metal fabrication machinery. Empire has a complete in-house service department with experienced factory trained service technicians located in Manitoba and Ontario for off-site service anywhere in Canada.

We accept trade-ins and sell on consignment so used machinery is thoroughly checked, serviced and available with a 30 Day Used Equipment Guarantee. **Take a look** at our current list of in-stock Used Sheet Metal Equipment. If you don't see what you need, **contact us** and we will do our best to find the right machine for you!

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