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FLEXIBILITY FOR CHANGE

How Manufacturing and Industrial Companies Can Use Track Busways to Create A Customized, Flexible, and Scalable Power Distribution System in Their Facilities

ABSTRACT

In today's fast-paced business world, the companies that will survive are not necessarily the largest or most innovative, but the ones that have the flexibility to adapt quickly to changing needs and unexpected events.

A reliable power distribution system is an essential element of any manufacturing or industrial facility. Unfortunately, traditional pipe & wire systems don't have the flexibility to handle quick changes in layout and machinery on the factory floor. When manufacturers must move, add, or replace machines or reconfigure assembly lines, they must often reconfigure electrical conduit and wiring to bring power to the machines in their new locations, or to support increased power loads.

These types of changes are often expensive and time-consuming, resulting in downtime for the machines and lost profits due to lower productivity. Track busways offer an innovative alternative for power distribution that is ideal for today's manufacturing and industrial production environments. The flexibility of track busways allows you to make quick changes in your power distribution layout, to support changes in assembly line layout and new locations of machinery. Track busways provide localized power to the machines, and you can easily scale up power to handle higher electrical load requirements. Also, track busways provide significant long-term savings in the Total Cost of Ownership (TCO) of your power distribution system.

INTRODUCTION

"A lot of times, people don't know what they want until you show it to them."

— Steve Jobs

An effective and reliable power distribution system is an essential element for any manufacturing or industrial facility. For decades, manufacturers and other industrial companies have relied on traditional electrical conduit and wiring systems —informally known as "pipe & wire systems"— to deliver power to manufacturing equipment, such as assembly line machinery. Effective power delivery allows those machines to produce the goods that the company needs to fill orders for consumers and/or B2B customers.

But traditional pipe & wire systems have numerous drawbacks, the chief one being their lack of flexibility in adapting to changes. Whenever manufacturers must move, add, or replace machinery on the factory floor, they must often reconfigure their power distribution system as well. They must tear out electrical conduit and wiring, and rewire the system to bring the requisite power to the machines in their new locations. These changes are often done at great trouble and cost to the company, with a potential loss of profits due to decreased productivity and downtime.

Fortunately, there is an alternative. A track busway system provides the same high-performance power delivery as traditional pipe & wire systems. But track busways also offer the flexibility to make quick and easy changes in your power distribution layout, and the scalability to accommodate additional and/or higher power loads. A track busway system lets you adapt your power distribution to the changing needs of your facility, with far less trouble and cost.

Although track busway systems are commonly used in data centers, many manufacturing and industrial companies have yet to discover their benefits. In this white paper, we'll examine how track busway systems can be used in these types of facilities, and their advantages in flexibility and reduced TCO over the long term.

Please note that while this white paper focuses on manufacturing, there are numerous industrial settings that can benefit from using a track busway power distribution system. These include:

- Automotive manufacturing and supply facilities
- Air & defense manufacturing
- Airports, truck terminals, and other transportation centers
- Computer Numerical Control (CNC) machine shops & 3D printers
- Distribution centers
- Food & beverage manufacturing & processing plants
- Indoor agricultural cultivation & green facilities
- Medical device & Biopharma manufacturers
- Research laboratories
- University, trade school, or public school laboratories

THE CHALLENGES FACED BY MANUFACTURING & INDUSTRIAL FIRMS

Change is a continuous factor in today's manufacturing and industrial facilities. On the factory floor, production and facilities managers frequently need to rearrange their assembly lines and work stations, swap out old machines for new ones, and modify their manufacturing process flows to increase productivity and meet customer demands.

A recent survey conducted by Starline shows that manufacturing companies will make at least one significant change to their production environment every 6–12 months. The most common reason for these changes include:

NEW/UPGRADED EQUIPMENT

An older manufacturing machine reaches the end of its useful life or becomes obsolete, and must be replaced with a newer, more advanced model. Or your company may create a new product or a new version of an existing product, or offer customized products based on customer needs. This requires you to add assembly lines, work cells, and/or new machines to your manufacturing process in order to handle mass production or product customization.

PRODUCTION LAYOUT CHANGES

Your company may decide to reconfigure its manufacturing environment to improve productivity or smooth out production problems. For example, your manufacturing engineers may determine that they can increase production efficiency by 30% by modifying or combining various production or assembly lines.

FACILITY CHANGES

Your manufacturing operations have outgrown your current facility, requiring you to either (1) build an addition onto that facility, or (2) build a second manufacturing facility, to keep up with anticipated growth over the next few years.

GEOGRAPHIC CHANGES

For various reasons, your company may decide to move its manufacturing operations to another facility, city, or state. Maybe your company builds a second facility, and decides to consolidate manufacturing of a certain product there. Or maybe another state offers tax breaks and cheaper real estate for manufacturers, or is less likely to be affected by weather events due to climate change.

MARKET CHANGES

Market trends and conditions, new competitors and products, or acquisitions and mergers may force you to make manufacturing changes. Maybe your company acquires a global corporation as a new customer, and you have to expand production lines to meet that customer's orders. Or maybe one of your competitors goes out of business, giving you a larger market share for certain products, and you must increase production to keep up with higher demand.

UNEXPECTED EVENTS

The COVID-19 pandemic is a classic example of an unexpected event that required companies to rethink their business models. The pandemic forced many manufacturers to reorganize their facilities and operations around employee safety.

This included things like staggering shifts, rescheduling non-critical services, requiring employees to wear safety masks and protective gloves, and providing cleaning supplies for work stations and equipment.

A big challenge was how to introduce the concept of social distancing into manufacturing work environments. For some companies, this required them to reorganize equipment and work stations to provide a safe distance of six feet between employees as they were working.

THE CHALLENGES OF RECONFIGURING POWER DISTRIBUTION SYSTEMS

When manufacturers move machines and reconfigure assembly lines on the factory floor, they must also typically reconfigure the power distribution system that serves this equipment. In doing so, manufacturers face several challenges:

First, the installation window for these changes is often very tight, and work must be done quickly and efficiently. Operations managers request and/or schedule downtime in the production environment, and reorganizations of equipment and power distribution often take place under official or unofficial deadlines.

Second, any scheduled downtime often results in a loss of productivity, which can negatively impact the company's bottom line. During the reconfiguration, assembly lines are shut down, and production is halted or at a reduced capacity. Idle equipment severely hampers the company's ability to respond rapidly to customer demands. Operations managers must carefully plan, schedule, and manage the reorganization in order to minimize the impact on the overall business.

Finally, there is the problem of "future proofing." It's very hard for manufacturers to predict how or when business growth, technology innovations, or unexpected events will affect their production environment, requiring them to make changes in machinery, floor layout, and power distribution all over again.

THE DISADVANTAGES OF TRADITIONAL PIPE & WIRE SYSTEMS

The Starline survey found that 84% of manufacturers will make at least one significant change to their electrical power distribution system per year, often in accordance with changes on their factory floor. For pipe & wire systems, each change typically requires the equivalent of two weeks (i.e. 80 man hours) of labor. Traditional pipe & wire power distribution systems have numerous disadvantages that make it hard to adapt these systems to ongoing and frequent changes in industrial facilities. The disadvantages include:

LACK OF FLEXIBILITY

Lack of flexibility is often the biggest drawback in traditional pipe & wire systems. This is usually due to two factors:

1. Traditional pipe & wire systems often require complex layout planning and design
2. Electrical conduit and wiring are often hard-wired into the walls and ceiling of the facility

Figure 1 shows a typical design of a traditional pipe & wire system. (If a picture is worth a thousand words, then this photo should speak volumes.)

Figure 1. Traditional pipe & wire system

When a company reorganizes its assembly lines, it may take them only a day to move machines to their new positions on the factory floor. But it might take several weeks to reconfigure the pipe & wire system that serves those machines. Electricians must tear out conduits, rewire power distribution to the new locations, and connect the wiring back to an upstream breaker, usually located in a faraway panelboard. Again, during this time, the machines are often sitting idle, and the company is losing money due to lost production.

Often, the managers who are directing the move aren't sure where each piece of machinery will end up until they actually move it. Once the move is finished, they must alter their plans for rewiring, in order to bring power to each machine at its exact new location. The more complex the electrical system's design, the harder it is to adapt the pipe & wire system to fit the factory floor's new layout.

LACK OF SCALABILITY

If a company wishes to scale up production by adding more machines on the factory floor, they must reconfigure their pipe & wire system to provide power to those new machines. If a company builds an addition onto an existing facility, or opens a second facility in another building, and installs a pipe & wire system, it will have the same challenges (i.e. lack of flexibility) that we discuss here.

A more significant problem is lack of scalability for adding power loads. If, say, a company adds a new machine that requires 40 amps, but the wiring in their power distribution system is only rated for

30 amp delivery, they must rewire the system to handle that 40 amp load.

If the company adds additional machines on the factory floor, but discovers that it has maxed out provisions for new breakers in the upstream panelboard, they may need to install a sub-panel. Again, this installation can take several days or weeks, during which the machines are sitting idle, and the company is incurring losses due to reduced productivity.

INCREASED TCO OVER TIME

Over the years, a pipe & wire system might need to be reconfigured and rewired several times, to keep up with machinery and layout changes. The Total Cost of Ownership (TCO) of the system increases dramatically over time, largely due to the ongoing labor costs of rewiring the system.

Also, any electrical conduit and wiring components that are removed during the rewiring work are typically non-reusable, and must either be recycled or thrown away. The discarded materials represent a loss of money for the company, and further increase the system's TCO.

SAFETY ISSUES

Manufacturing facilities often use multi-outlet receptacles to distribute power to their equipment. If multiple circuits overload panel capacity, or if multiple plugs overload the receptacle (Figure 2), it may cause overheating of extension cords, which is a potential fire hazard or code violation. Additionally, when power or extension cords are run across the floor to a faraway receptacle, they create a tripping hazard for workers that may lead to injuries or OSHA code violations.

Figure 2.

MAINTENANCE AND REPAIR ISSUES FOR MACHINERY

In a manufacturing facility, an upstream main or branch breaker may feed power to multiple machines in an assembly line or other production area. If one machine requires service, the maintenance people must often turn off the breaker and shut down the entire assembly line or production area before work can proceed. Again, this downtime will slow productivity, and may result in lost profits for the company.

If power and extension cords are used, it may be a matter of unplugging the machine in question before it can be serviced. But power cords are often plugged into electrical receptacles in a disorganized way, violating electrical codes, overloading the cords, or simply generating a tripping hazard.

LACK OF FUTURE-PROOFING

Once you have reconfigured the assembly lines and rewired the power distribution system, the changes are far from permanent. It may be three months or two years, but it's only a matter of time before machines on the factory floor must be rearranged or replaced. When that happens, your company will need to rewire the pipe & wire system again, to account for the changes and bring power to the machines in their new positions.

INTRODUCING THE TRACK BUSWAY SYSTEM

A track busway system offers high-performance power distribution for machines and equipment with high power needs. Think of track busways as being a better, more sophisticated version of the track lighting that you may have in your home. The components of this system include:

TRACK BUSWAY SECTIONS

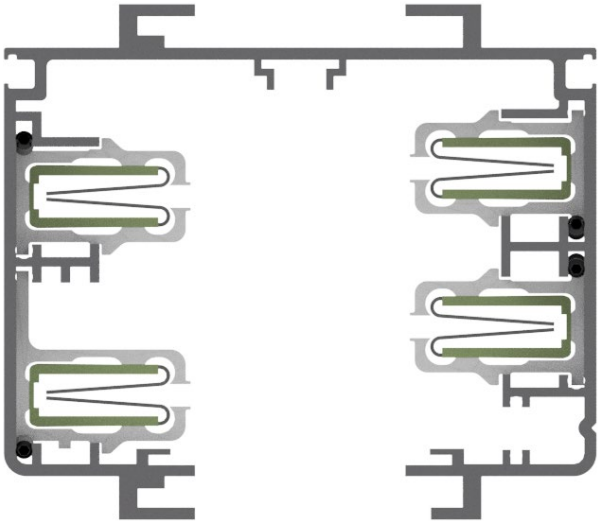

Figure 3. Open channel track busway

An open channel track busway (Figure 3) consists of a U-shaped aluminum shell, with copper or aluminum busbars mounted along its interior walls. A continuous access slot (the "open channel") runs along the bottom of the busway, for the insertion of plug-in units.

Figure 4 shows the different types of busway components:

- **Straight sections (a.)**— The main busways that deliver power to your assembly line equipment, workstations, etc. Standard lengths are 5, 10, and 20 feet (or 1.5, 3, and 6 meters).
- **Elbows (b.)**— Used to join two straight sections in a horizontal 90-degree turn on a busway run.
- **Tee Sections (c.)**— Used to connect three straight sections in a 90-degree branch leg on a busway run.
- **Power Feed Units (d.)**— A power feed unit is usually placed at the beginning of a busway run, and supplies incoming power from the panelboard or other power source. The unit may also include power monitoring equipment, an Infra-Red (IR) window for thermal scanning, and a serial, Ethernet, or Wi-Fi connection for reporting data.

Figure 5 shows a typical layout of a track busway system. Using a combination of straight sections, elbows, and tees, you can create a custom busway grid that fits the power distribution needs of your manufacturing facility. The busway sections are suspended from the ceiling, wall-mounted, or mounted on vertical support poles, directly above or in close proximity to the machines they serve.

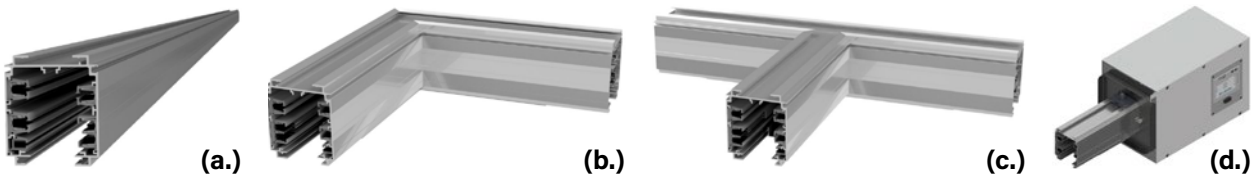

Figure 4. Different types of busway components

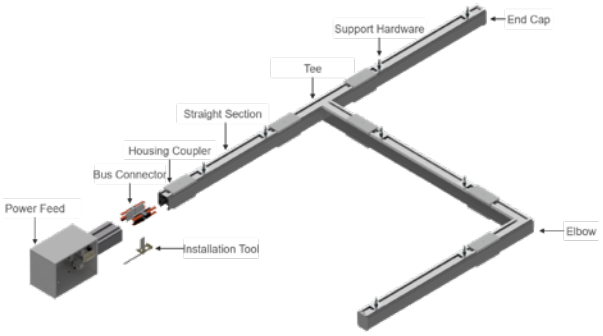

Figure 5. A typical layout of a track busway system

Figure 6. Plug-in units

PLUG-IN UNITS

The plug-in unit integrates both the circuit breakers and the electrical outlets that you use to supply power to machines on the factory floor. You insert the plug-in unit's upper paddle into the open channel in the bottom of a track busway, and turn the unit to lock it into place (Figure 6). This connects the paddle to the electrical busbars that are mounted inside the busway section. It only takes a minute to install a plug-in unit on a busway, and no tools are required. You can then plug your machine's power cord into the unit's outlets, and flip the breaker switch to the ON position to supply power to the machine.

You can order custom-made plug-in units, with features that fit the needs of your specific work environment. Available custom features include number and type of outlets, circuit breakers of specific brands or ratings, drop cords with custom lengths, retractable cord reels, power metering, and safety features such as finger shrouds to prevent accidental breaker turn-off during maintenance. Figure 7 shows three examples of custom plug-in units, but there are literally millions of combinations.

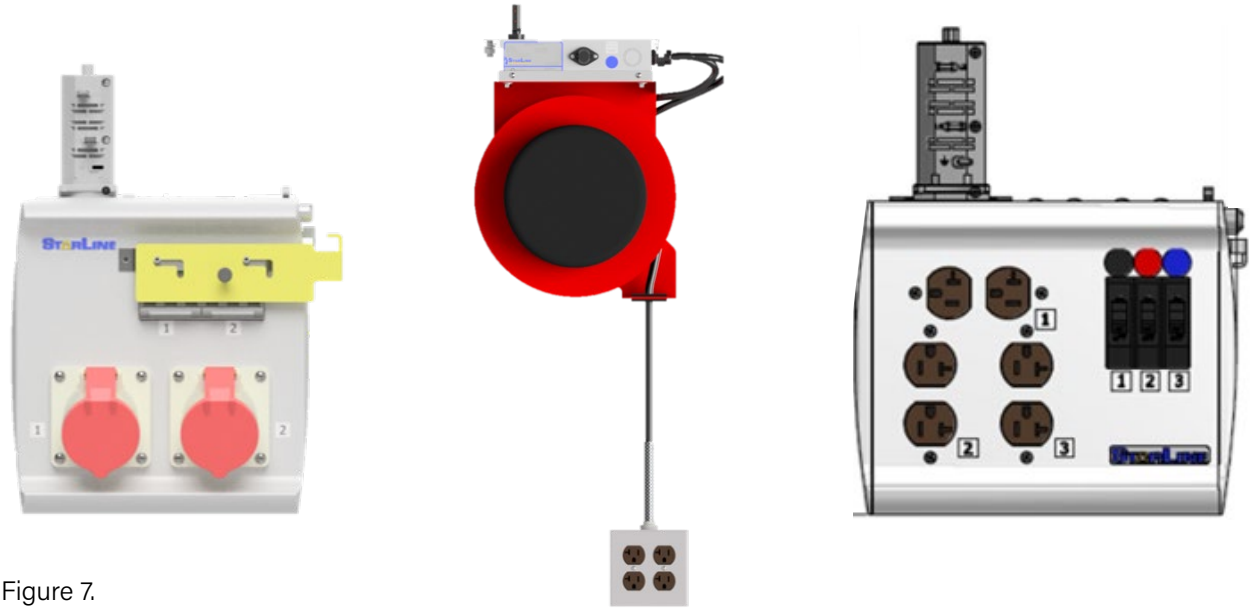

Figure 7.

BUSWAYS vs. BUSDUCTS

The terms “busway” and “busduct” are often used interchangeably to describe two different types of conductor-bar based power distribution systems. However, there are significant differences between track busways and busducts that you should understand.

Busducts are enclosed metal ducts that convey copper or aluminum electrical busbars. Similar to air ducts, busducts are often permanently mounted on or attached to the ceiling or walls. Unfortunately, this gives busducts the same lack of flexibility as a traditional pipe & wire system. If you reconfigure your assembly line or move equipment, you often have to take down the busduct system and move it as well, at great trouble and cost.

Busducts usually provide a limited number of fixed ports as outlets for electrical plugs, which also limits the number of machines the busducts can serve. Depending on the layout of your factory floor, you often have to move the machines closer to the busducts, or use long extension cords to connect machines back to the ports. As with a traditional pipe & wire system, you have to bring the machines to the power source, instead of bringing the power source to the machines.

ADVANTAGES OF A TRACK BUSWAY SYSTEM

FLEXIBILITY FOR CHANGE

Since a track busway system is not hard-wired into the ceiling or walls, it gives you the flexibility to make quick changes in the layout of your power distribution system. If you need to reconfigure assembly lines on the factory floor, you can easily reorganize your track busway grid to accommodate the new locations of machinery. All you have to do is take down the track busway sections, move them to the new positions, and reconnect the busway sections and plug-in units above the machines they serve. You can often do this in a matter of hours or overnight, instead of days or weeks, with little or no production downtime.

SCALABILITY

A track busway system grows with you. If you need to expand the layout of your assembly lines, you can add additional busway sections to your existing grid to distribute power to the new machines. If you build a new manufacturing facility, or expand your facility by adding an additional wing, you can easily install a new track busway system to support it.

If you need to scale up power (i.e. for a new machine that requires 40 amps instead of 30 amps), you simply need to replace the old plug-in units with new ones that are designed to support higher power requirements. It only takes a few minutes to swap out plug-in units, and this can be done safely on a live busway.

EASY INSTALLATION

Track busway systems can be **installed up to 90% faster** than traditional pipe & wire systems, and with far less labor for installation. Where it may take days or even weeks to install electrical conduit and wiring, a track busway system can be installed in just a few hours or overnight.

(If you're replacing a pipe & wire system with a track busway system, and the assembly lines and work stations are already in place on the factory floor, you may be able to install the track busway systems with little or no downtime to the production environment.)

LOCALIZED POWER DELIVERY

With track busway systems, all the necessary components in a complete electrical distribution system —breakers, connectors, power outlets, metering, surge protection, etc.— are incorporated into the plug-in units. By installing busway systems and plug-in units directly above your assembly lines and work stations —that is, above or near the machines they feed— you can deploy power throughout your facility and position it at the exact point of use. In other words, **you are bringing the power source to the machines instead of trying to wire the machines back to the power source at a distant panelboard or outlet receptacle.**

Track busways can deliver power levels of between 40 and 1200 amps, and up to 600 VAC or VDC, single-phase or three-phase. (100–225 amp busways are the most common in manufacturing facilities.) Depending on its length and power delivery rating, a single busway section can support multiple plug-in units. Also, depending on the number of outlets it has, a plug-in unit can support multiple power cords. These features allow you to provide power to multiple machines in one location.

Figure 8. Conventional pipe & wire system (left) vs. track busway power distribution system (right)

LINEAR DESIGN

Looking at the two photos (Figure 8), you can see the difference in layout design between a conventional pipe & wire system (left) and a track busway power distribution system (right). The simple linear design of track busways is much more organized, making it easier to design, install, maintain, and make changes to the system layout.

REUSABLE COMPONENTS

Track busway sections and plug-in units are reusable, and can be moved from one location to another. Unlike traditional conduit and wiring, when you make changes to your track busway system, you don't have to recycle or throw out the old components and start all over again.

EASIER MAINTENANCE AND REPAIR FOR MACHINERY

A track busway system makes it easier to do maintenance and repair on individual machines on the factory floor, since breakers and fuses are located within the plug-in units themselves, instead of at a distant panelboard. To turn off a machine, you simply have to flip the corresponding breaker switch on the plug-in unit for the machine you need to service. This cuts power to that one machine, while the other machines powered by that plug-in unit remain operational. (This also reduces the chance that you will accidentally unplug the wrong machine, since you know which machines are served by which plug-in unit breakers.)

If a fuse blows, you can easily remove the plug-in unit from the track busway, replace the fuse, and return the unit to operation. You can switch out the plug-in unit while the track busway is live, without cutting power to other plug-in units, or other machines, powered by that busway.

SAFETY

All track busway systems have built-in safety features. For example, the track busway grid includes a ground path (earthing) system throughout its enclosure. All plug-in units have a grounding feature that connects to the ground path when you insert the unit into the busway's open channel. This ensures that the plug-in unit is grounded before the electrical connection is made to the power busbars.

Additionally, since the plug-in units provide localized power to your machines, you don't need to run power cables and extension cords across the factory floor to plug them into a distant, overloaded receptacle. This eliminates both a potential fire hazard and an OSHA violation (i.e. tripping hazard) that could result from using these cords.

A FUTURE-PROOF SYSTEM

If your factory floor requires frequent changes, you don't have to worry if your power distribution system will need to be reconfigured six months or a year from now. The flexibility of the track busway system guarantees that you will be able to make quick and inexpensive changes to your power distribution layout to accommodate any future changes in machinery and assembly lines.

TRACK BUSWAY SYSTEMS IN THE COVID-19 CRISIS

In March, 2020, a major Detroit-based auto maker was assigned by the federal government to manufacture medical equipment for the COVID-19 pandemic. In less than two weeks, the company converted an Indiana auto facility to produce critical-care ventilators, to be used in hospital treatment of COVID-19 patients. Using 480 feet of 225-amp track busway sections and 120 plug-in units, employees were able to install a new power distribution system in the facility, over a two-day weekend, to provide power to the new manufacturing machines already in place. The facility was able to begin producing ventilators on the following Monday.

The flexibility of track busway systems makes them ideal for industrial companies that are required to reconfigure their production environments in response to the pandemic. For example, you may need to move machines and work stations farther apart on the factory floor, to provide social distancing for employees. In this case, you can move a plug-in unit closer to the equipment it serves by sliding it along the track busway's open channel, and/or use custom plug-in units with 25-foot drop cords and outlet attachments to provide power to the separated machines.

COST COMPARISON OF PIPE & WIRE VS. TRACK BUSWAY SYSTEMS

There are two types of costs that you should look at when comparing pipe & wire vs. track busway systems: (1) Cost of Installation and (2) Total Cost of Ownership (TCO) over the life of the system.

Table 1 compares the Cost of Installation for both types of systems. As you can see, traditional electrical conduit and wiring systems have a low cost for materials, but a high cost of labor for installing those materials.

With track busway systems, the opposite is true. There is a higher cost for the materials, but a lower cost of labor for installation. But in the end, the installation costs for both systems are almost equal.

Table 1. Cost of Installation comparison of Pipe & Wire vs. Track Busway Systems

PIPE & WIRE — CONVENTIONAL APPROACH

DESCRIPTION
Qty. 15—20amp Circuits: ▪ Install 5 ¾ conduit runs with 3 20amp circuits per run no shared neutrals, runs spaced 20′ over 100′ span beginning 150′ from panel board. 120amp receptacle with RS covers per circuit. ▪ All conduit run on strut rack to location. ▪ Provide pipe support every 6′ over 250′ span (43 supports) ▪ Support provided at each box location (15 supports)

LABOR

Description	Man Hours
Install ¾ pipe, boxes, and fittings (Est. 1100′, 15 box locations)	43.2
Install supports 10min per x 40	6.6
Pull wire (5runs, 7conductors per)	12.0
Install devices 15min per	3.8
Total Man Hours:	65.6
Rate per hour:	$97.50
TOTAL LABOR COST:	**$6,989.08**

BILL OF MATERIAL

Qty	Description	Cost
15	15—20amp breakers	$98.99
1	¾ EMT estimate 1100′	$418.00
30	Box connectors, 110 Couplings	$40.00
3	Wire 1000′ per roll red, black, blue, green. 3000′ white rolls	$509.00
15	Boxes, R/S covers, 20amp receptacle	$56.00
6	Sticks strut, box ¾ strut straps, misc.	$120.00
	TOTAL MATERIAL COST	**$1,357.16**

TOTAL COST (Material + Labor): $8,346.24

OPEN-CHANNEL BUSWAY

DESCRIPTION
100amp Feeder and Busway Install: ▪ Install 100′ 100A 3-phase feeder to end feed. ▪ Utilize three breaker spares within main panel. ▪ Mount/hang 100A end feed and 100′ busway (20′x 5, 10′ rod spacing with end support). ▪ Run 1 ½ EMT with fittings and support hangers to end feed. ▪ Install deck anchors for busway, hang busway, and splice with tool provided. ▪ Install twist lock boxes where needed.

LABOR

Description	Man Hours
150′ 1 ½ EMT with fittings	9.5
Pull wire and terminate	4
Hang busway with anchors (1hr. per 10′ 15min. per end feed)	12.3
Total Man Hours:	25.8
Rate per hour:	$97.50
TOTAL LABOR COST:	**$2,743.43**

BILL OF MATERIAL

Qty	Description	Cost
5	20 ft long,100A, 600V Busway, 4pole/gd	$98.99
1	End-Feed Power Supply, 4P, 100A, 10kA, 600V, UL	$418.00
1	End Cap	$40.00
12	TB/FB Hanger Bolt w/ 3/8 Rod Coupler	$509.00
5	Housing Coupler, 60A	$56.00
15	15A 120V Rec//Fuse/Blue Plug in Units	$120.00
	TOTAL MATERIAL COST	**$5,602.30**

TOTAL COST (Material + Labor): $8,345.73

Assumptions: 1. Hourly rates fluctuate widely. Equal labor rates used based on Pittsburgh region at time of quote; 2. Annual inflation of 3% used; 3. All estimates provided based on actual electrical contractor quotes for a real small project

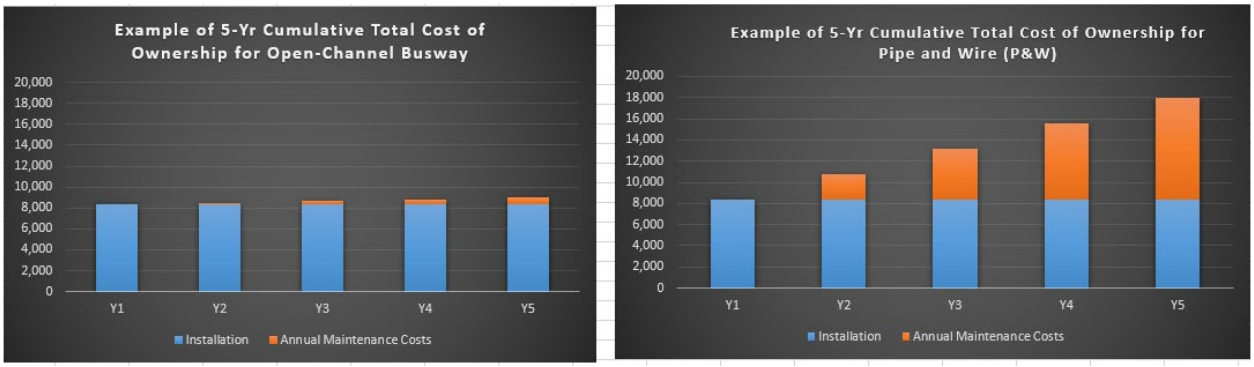

Figure 9. A 5-year cumulative TCO comparison between Pipe & Wire vs. Open-Channel Busway

Figure 9 shows a five-year TCO comparison between a traditional pipe & wire system and a track busway system. This includes the initial cost of a new 100A installation, and assumes one circuit relocation per year.

As the graph shows, the TCO of an electrical conduit and wiring system rises steadily over five years, largely due to labor expenses for relocating circuits. And this graph doesn't take into account opportunity costs — or losses due to assembly line downtime while circuit renovations are taking place.

But over that same five-year period, the TCO of the track busway system remains lower than the TCO of the traditional pipe & wire system. With track busways, you can easily make changes in power distribution layout, and relocate circuits by moving plug-in units. This flexibility significantly reduces your labor costs, which results in a much lower TCO over time.

WHAT TO LOOK FOR IN A TRACK BUSWAY SYSTEM

Reliability— Look for a busway system that has been installed in multiple manufacturing and industrial facilities. It should have an established reputation for reliable and efficient power distribution, a long, useful service life, and a minimal rate of component failure. Furthermore, system components should be engineered with features to ensure reliability (i.e. busway sections should be held together with maintenance-free compression-fit joints).

Flexibility— A busway system should give you flexible design and power distribution options. It should enable you to build up, scale out, make quick layout changes, and easily increase power densities, according to the changing needs of your manufacturing facility.

Safety— The elements of a busway system should guarantee safety for your employees, your machinery, and your facility. Look for a solution where the track busways are "finger safe" —that is, if a worker accidentally inserts a finger into the open channel, the inside insulation protects them from shock— and where you can safely insert plug-in units while the busway is live. Your track busway solution should have multiple safety certifications, such as UL.

Additionally, you should look for a track busway systems provider that offers the following features and services:

Experience— Look for a busway solutions provider that focuses solely on the manufacturing of track busway systems. It should be the core of their business, not just one of many electrical products that they sell. The provider should have a list of clients that includes manufacturing and industrial companies, as well as clients in other industries (government organizations, universities, hospitals, etc.).

Custom Solutions— Your provider should be able to engineer and manufacture customized busway products, such as plug-in units that fit the specific power needs of your facility. Also, they should offer custom solutions, such as color-coded components (i.e. outlet receptacles on a plug-in unit are marked with red, blue, and black covers or labels to indicate different voltages).

Technical Services— Your solutions provider should offer a range of technical services, such as on-site installation support, system start-up, meter programming, troubleshooting, and routine maintenance. The provider should also offer 24/7 support from a global team of engineers, technicians, and sales representatives.

Conclusion

In today's fast-paced business world, the companies that will survive are not necessarily the largest or most innovative, but the ones that have the flexibility to adapt quickly to changing needs and unexpected events.

A track busway system provides a competitive edge for your manufacturing or industrial company, allowing you to make quick changes to power delivery in your production environment with little to no disruption. If you are reconfiguring machinery, using track busways allows you to quickly return to full productivity, with minimal trouble and downtime. If you're scaling up your manufacturing operations with a new or expanded facility, a track busway system allows you to open that facility faster, since the busway system can be installed up to 90% faster. Either way, using track busways helps you to maintain or increase profitability, while reducing the long-term costs of your power distribution system. A track busway solution will be an asset that will serve the needs of your manufacturing operations over the long run.

Call or email Starline today to find out more about how track busway solutions can enhance your manufacturing and industrial facilities.

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