



Understanding the Benefits

of Transair® Aluminum Piping

Energy Efficient, Lightweight, Corrosion Resistant & More...

Introduction: What Is Transair® Pipework System?

In the world of manufacturing, compressed air is a powerful and important resource. Whether you're powering shop tools with compressed air, automating your production line, or using it for sandblasting, you can always benefit from a more efficient and streamlined compressed air system.

That's exactly what Transair® is. Developed by Parker Legris, Transair® is an innovative, aluminum-based pipe system that's designed specifically to address the issues posed by traditional compressed air piping, such as black iron pipes.

In this article, we will explore the basics of Transair®, why it is the best option in most applications and highlight the benefits in comparison to black iron and other types of piping. Let's begin.



The Drawbacks of Traditional Pipe Systems

The Most Common Black Iron Pipes

Let's start by discussing the drawbacks of one of the most common compressed air pipe distribution systems. For decades, the most common material used to convey compressed air was black iron pipe.

Black iron pipe has a number of drawbacks that make it a less-than-stellar option for compressed air. First, it has to be installed by a licensed technician, and due to the heavy-duty construction and weight, this tends to be quite expensive.

In addition, many black iron pipes are not installed correctly. Their design prevents laminar, uninterrupted airflow, and makes minimizing and diverting condensed water flow difficult, which can lead to corrosion issues. Corrosion issues will further reduce the system's efficiency, and contaminate the air with particulate damaging downstream equipment.

Finally, in order to use black iron pipe you may need to reinforce your building to support the weight of the pipe. A 1" OD schedule 40 black iron pipe weighs 1.68 lbs/ft., but 1" OD aluminum pipe only weighs .58 lbs/ft. Aluminum is nearly 3x lighter, making it much more manageable for one person, while the black iron pipe solutions would require multiple people.

Black iron is also difficult – if not impossible – to modify, and very costly to repair, which leads to further costs if a change in floor layout is required or if a piece of piping fails.



Alternative Pipe Materials: Copper, Steel, and More

We know black iron has a number of drawbacks. Why shouldn't you use steel, copper, or even plastic? What are the drawbacks of these alternative piping materials? Let's take a quick look at these alternatives:

Copper

Copper is a reasonable choice for an alternative to black iron, due to its resistance to corrosion and lighter weight. However, installing copper is labor intensive, and it's prone to air leaks. The flames and fumes from welding copper tubing can be hazardous, increasing installation costs.

Plastic

Using plastic is extremely dangerous. Plastic cannot handle periodic over-pressurization, which is usually unavoidable in industrial environments. In this application plastic pipe will have a short life expectancy, and possible catastrophic failure.

Steel

Steel is lighter than iron, but it is quite difficult to install. Only experienced fitters and plumbers can install steel pipe correctly using specialist tools. In addition, getting laminar airflow is difficult, because steel can corrode, which leads to increased internal surface roughness. Steel is also susceptible to high-pressure drop and air leaks.

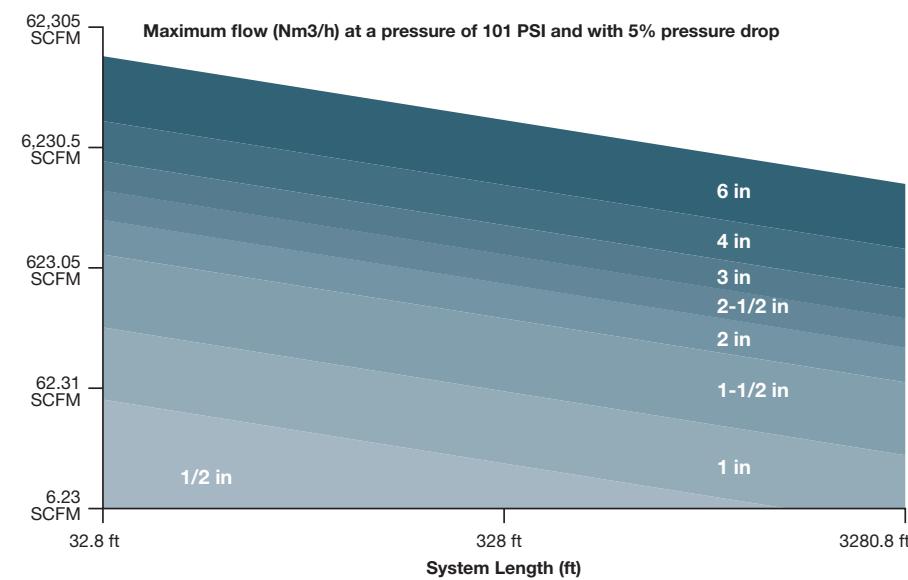
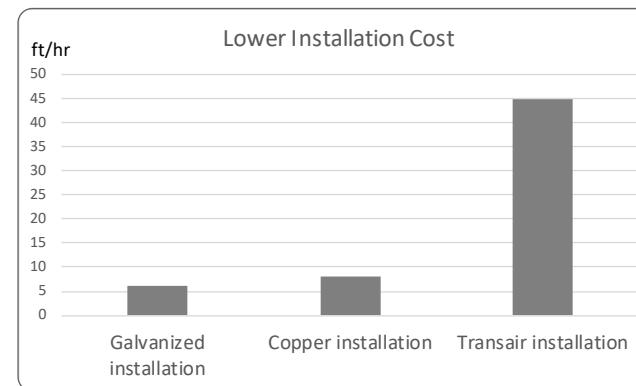
Stainless Steel

Like black iron, stainless steel can be expensive and extremely heavy in larger pipe diameters. It is not versatile, and requires specialists using bulky and heavy tools to install it properly.

The Benefits Of Using Transair® Aluminum Pipes

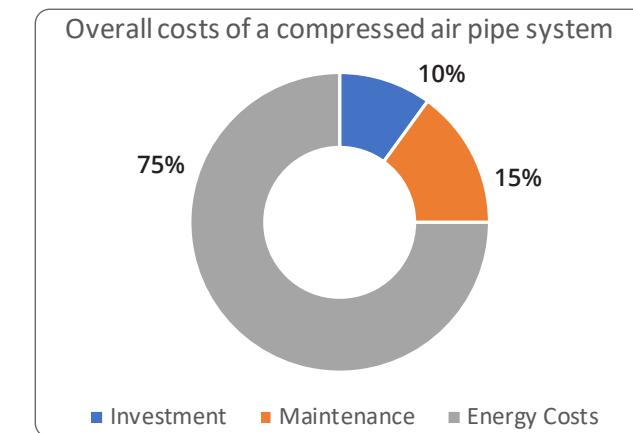
You are probably thinking all the options above are less-than-ideal, so why should you choose Transair® aluminum piping as an alternative? Here are a few great reasons why.

- **Weight reduction** – An aluminum piping system can be up to **12x** lighter than black iron. This means that it can be installed in almost any manufacturing plant, without requiring expensive bolstering or reinforcement of walls and ceilings.
- **Easier installation** – Aluminum is very easy to work with, and Transair® aluminum pipe does not require any soldering, welding, or threading. Simple DIY installation with push-to-connect technology reduces labor costs and makes it easier to work with, particularly on elevated platforms. The ability to expand the system (using pressurized outlets) while still under pressure means there is no need to stop production, making Transair® systems incredibly cost-effective.
- **Better airflow** – Transair® pipes are made of low-friction coefficient aluminum, and use full-bore fittings to minimize pressure drop, thereby maximizing energy efficiency, optimizing flow, and preventing leaks.



The Benefits Of Using Transair® Aluminum Pipes

- **Won't corrode** – Unlike copper, steel, and iron, compressed air condensation does not cause corrosion or degradation of aluminum pipes, ensuring the interior surface remains smooth and efficient for transporting compressed air.
- **Removable and reusable** – The Transair® system is fully modular, meaning you can disconnect and reconnect your pipes as you see fit. This allows you to reconfigure them and swap out damaged pipes without requiring a comprehensive overhaul of your system.
- **Power and electric savings** – Compressed air represents a huge energy expenditure for most manufacturers, and a great opportunity for cost savings. By using an advanced, modern system to transport compressed air, manufacturing plants could see cost savings of 20% or more within 12 months of implementation. With the smooth interior bore and the push-in type fittings, there are little to no restrictions within the aluminum pipe creating a laminar airflow as opposed to the turbulent air flow found in black iron pipes or others. This results in less energy to push the air through the pipe, making the Transair® Piping system an energy efficient choice for Manufacturers today.



- **Versatility** - In addition, Transair® products are versatile. Transair® can be used to transport compressed air (dry, wet, and lubricated), vacuum, and inert gases, at pressures of up to 232 PSI, based on pipe diameter, and at temperatures of between -4°F to +140°F.

For more information about tolerances, installation, and supported applications, feel free to contact us with your inquiry.

Transair® – A Better Choice For Your Manufacturing Facility

If you are interested in a better alternative to traditional compressed air piping made from black iron, copper, or steel, Parker Legris Transair® products are a fantastic choice.

Transair® pipes are energy-efficient, lightweight, reusable, recyclable, and cheap to install, with minimal maintenance costs. By making the switch, your manufacturing plant can save a tremendous amount of time, money, and power, compared to traditional piping materials. So don't wait – think about the needs of your business, and if Parker Legris Transair® products might be right for you!

Contact a Wainbee representative to discuss using the Transair® Energy Efficiency Calculator to help calculate your return on investment.



transairsales@wainbee.com



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