



Determining the best air distribution system

Your compressed air distribution piping is your tools for transporting compressed air and represents your link between supply, storage, and demand. In addition, compressed air represents one of the largest opportunities for immediate energy savings. A properly designed compressed air system typically saves up to 50% of its electric bill within 24 months.

The compressed air industry has long been dominated by traditional piping systems including steel, stainless steel, copper, plastic, and black iron. While these types are very familiar to the market, they present a number of disadvantages:

Copper:

- Labor intensive
- Installation can be dangerous from flames and fumes when welding
- Air leaks

Plastic:

- Extremely dangerous due to over pressurization
- Expansion/dilatation
- Short system life expectancy

Steel:

- Specialist tools required
- Experienced fitters only
- Corrosion susceptibility leads to internal surface roughness
- High-pressure drop/air leaks

Stainless Steel:

- Bulky and heavy tools
- Weight of larger pipes
- Non-versatile system

Black iron:

- Very heavy and difficult to install
- Susceptible to corrosion and air leaks
- Experienced fitters only
- Difficult to modify
- Costly to repair

In recent years, aluminum-based compressed air piping systems have risen in popularity, particularly due to their modularity, quick installation, and aestheticism. Aluminum also has a low friction coefficient, providing the best possible laminar flow. Full-bore fittings further minimize pressure drop for optimum flow and energy efficiency. Leak-free connectors prevent air loss and wasted energy.

Aluminum is ideal for installations requiring the highest quality air. Aluminum material will not rust or corrode, and has no rough surfaces or interior restrictions that accumulate contaminants. The smooth interior with full-bore design allows air to flow to your dryers and filters for efficient removal ensuring higher longevity of equipment.