

INGERSOLL RAND WHITE PAPER | APRIL 2023

High-Quality Compressed Air Solutions for White Goods Manufacturing





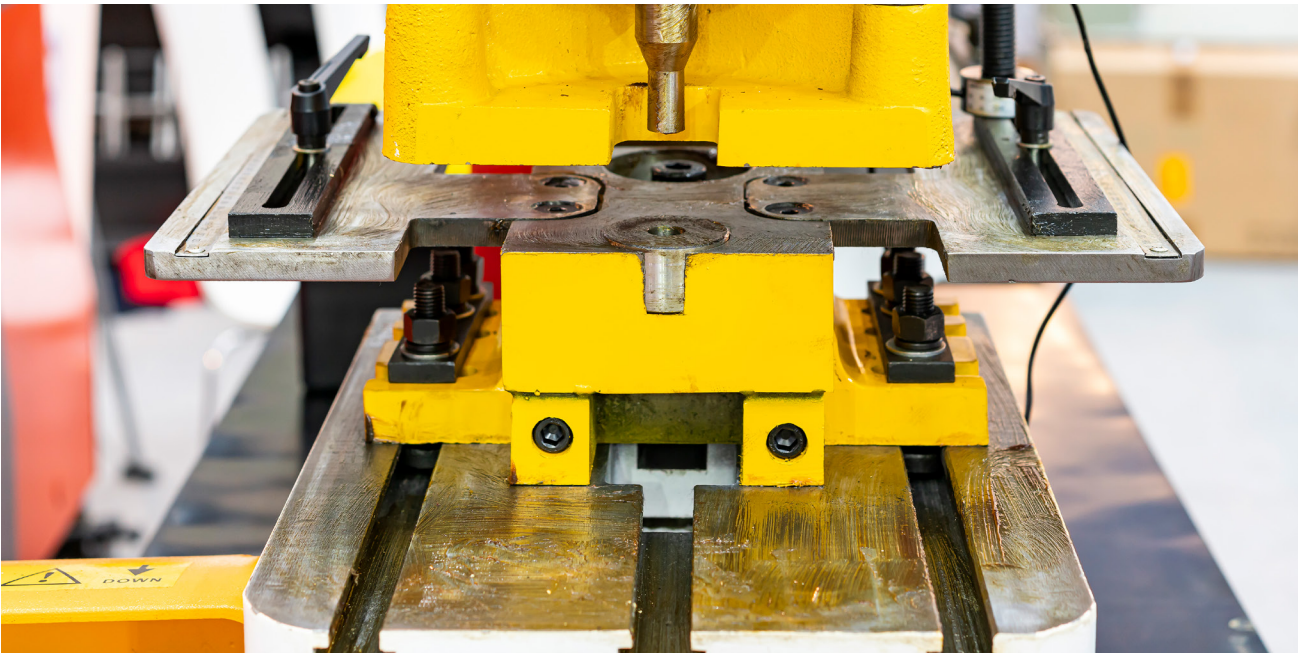
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Introduction

Compressed air is a vital component in the manufacturing of home appliances (white goods), such as refrigerators, washing machines and air conditioners. The production of these appliances requires a variety of manufacturing processes that rely on compressed air, including powering pneumatic tools, conveying raw materials and finished products, and cooling metalwork. Compressed air is a versatile, cost-effective and energy-efficient solution that has become an essential element in the modern manufacturing industry.

Finding a high-quality and reliable compressed air solution that meets the demands of white goods manufacturing can be overwhelming. With pressing concerns like supply chain issues, the economy and the labor shortage; designing, delivering and installing a customized air system is crucial in ensuring that your manufacturing operation has the compressed air it needs to operate efficiently.

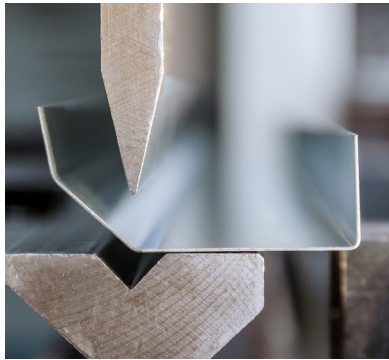


Global White Goods Manufacturing Market

Growing awareness of the importance of environmental sustainability has not missed the white goods industry. Major players in the market have been investing in energy-efficient products and manufacturing processes, driven by innovation, consumer demand and technological advancement. With an eco-friendly mindset, rising incomes and urbanization, the white goods manufacturing industry has experienced significant growth in recent years. As analyzed by Allied Market Research, the highly competitive white goods market equaled \$635.4 billion in 2019, and is estimated to reach \$ 1,031.0 billion by 2027, registering a CAGR of 7.8% from 2021 to 2027.

Compressed Air Applications in White Goods Manufacturing

Overall, the main goal of air compressors in white goods manufacturing facilities is to provide a reliable supply of clean, dry, compressed air at a stable pressure, at the lowest cost possible. Designing a compressed air system that ensures efficiency, reliability, and safety requires thorough consideration and extensive technological knowledge about the following applications:



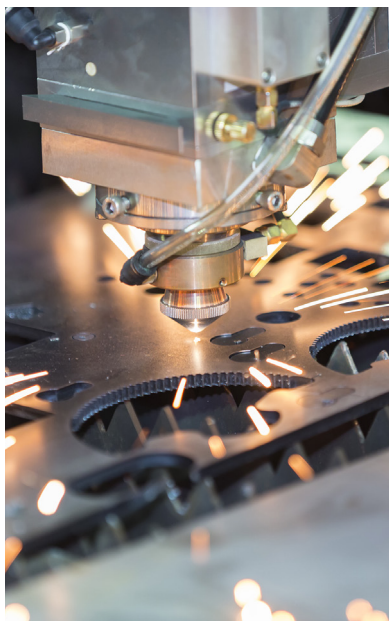
Air Power for Pneumatic Equipment and Tools

Powering pneumatic equipment and tools is the most common application for an efficient air compressor solution. The manufacturing process of white goods requires many types of tools and equipment that rely on compressed air to operate. The most common air operated tools are:

- Conveyor belts for transporting bulk white goods and heavy metal sheets
- Punch presses for punching holes in metal panels for ventilation, or shaping metal components, such as hinges
- Air hammers for forming and shaping metal parts
- Speed saws and drills for cutting metal sheets and creating precise shapes



No matter which pneumatic tool you use, controlling moisture is your number one concern. When you use dry, compressed air to power your equipment and tools, it not only helps to support your tool's performance and extends its life, but it also protects the quality of your end-product.



Cooling Metalwork and Tools

White goods manufacturing falls into the bucket of metal fabrication, in which a reliable air compressor system is the central power source—it's what keeps production moving quickly and efficiently. Metalwork consumes a lot of compressed air, from running pneumatic tools and lasers to activating shear and puncher machines, power punch hole drills, cutback saws and more.

Compressed air is also an effective method for cooling tools like roller mills that are used to grind materials or reduce the thickness of metal sheets. The grinding process can generate a significant amount of heat, which can cause the rollers and other parts of the mill to overheat and potentially fail. A compressor can be used to blow cool air over the mechanical components of the mill, helping to prevent overheating and extending the life of the equipment.

Trust the Experts

Ingersoll Rand has been working with white good manufacturers to provide clean, reliable and energy efficient solutions that perfectly match the needs of their applications. Whether this involves the operation of pneumatic tools or any part of the metalworking process, our experts can provide a complete and customized compressed air solution that guarantees the highest performance throughout the entire white goods manufacturing cycle.

Ingersoll Rand's compressed air solutions will keep your white goods production at full swing. We offer a wide portfolio of innovative air products, services and solutions that enhance energy efficiency and help you fulfill your productivity objectives.

Rotary Screw Compressors

Our oil-flooded compressors are designed with reliability in mind, ensuring maximum productivity, longer equipment lifespan, lower operating costs and increased profitability. Our advanced airend and drive component designs offer exceptional power and top-class air flow, leading to decreased energy consumption. Our devices are built to withstand continuous use and can keep your white goods manufacturing plant operating smoothly, minimizing unproductive downtime caused by lengthy interruptions.



Air Compressor Dryers

Air compressor dryers are crucial to maintaining the optimal performance of compressed air applications, as moisture and other contaminants can cause significant problems. To prevent downtime and overcome extreme conditions, it is necessary to utilize air compressor dryers. Our dryers are designed to complement your entire air compressor system, not only by ensuring the production of high-quality air, but also by improving productivity, efficiency and overall manageability of operations.



Global Service and Support Network

Ingersoll Rand offers various maintenance programs as well as air compressor repairs that use genuine OEM components. Depending on your manufacturing plant's needs, we offer a wide variety of service options, from comprehensive packages that eliminate all customer operational risk to simple packages that include delivering the right part to you at the right time.

We know that trying to decide which package provides the most efficient support to keep your business up and running requires a lot of consideration. That's why our engineers can perform a deep analysis to help determine which maintenance plan is the best for your compressed air system needs.



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