

SHEET METAL WORKING AT THE HIGHEST LEVEL

KAESER compressed air station for maximum energy efficiency

In the vast field of sheet metal processing, Pfister Metall is the expert with distinctive manufacturing know-how and extensive customer orientation. In the field of metal processing, Pfister Metall specializes in meeting the individual requirements of its customers. High-quality products are manufactured using high-tech, state-of-the-art machinery and innovative production processes. The wide range of services extends from punching, laser cutting, punch-laser processing, bending, tube bending and welding to component assembly and surface finishing. As a flexible sheet metal processor, Pfister Metall is capable of producing sample parts, small batches and large series quickly and cost-effectively.

Active in many industries

With its products, Pfister Metall is represented in many important industries. The many years of experience as a sheet metal worker, the well-founded technical know-how in metal processing, as well as the comprehensive production competence in sheet metal processing have made Pfister Metall a competent partner in mechanical engineering, plant engineering, toolmaking, the automotive and electrical industries, apparatus engineering, medical technology, as well as in the field of textile machines and machine tools.

Pfister Metall offers far-reaching production competence in sheet metal working, which is convincing due to the highest quality and processing precision is tailored to customer-specific requirements. Not only products, but also production processes in metal processing at our customer is to harmonize the workplace of the employees, the means of production and the product in order to manufacture products with the best price-performance ratio. This systematic approach runs through all areas of the entire sheet metal processing at our customer.



Edging robot with vacuum gripper. Numerous machines operate with compressed air.

Picture source: Pfister Metall



What makes laser processing so special?

Where massive tools with enormous mechanical forces act on the material in other sheet metal processing methods, a laser beam does its work in laser cutting without contact. The light waves are absorbed by the material and converted into heat. The sheet heats up, melts, vaporizes or burns.

THROUGH THICK STEEL LIKE THROUGH BUTTER

For cutting, the laser beam is focused. All of its power is then focused on a point whose diameter is usually less than half a millimeter. Where the focused beam hits the workpiece, the metal immediately begins to melt. In some cases, it even burns or vaporizes. After piercing, the actual cutting begins. The laser beam moves along the part contour and continuously melts the material. Metal melt and slag are blown out downward. This creates a narrow kerf that is barely wider than the focused laser beam itself.

Use of compressed air in sheet metal processing

However, compressed air is not only required for laser cutting; it is also used specifically in many other processes. Material handling, for example is no longer conceivable with compressed air. In times gone by, employees had to handle the sometimes heavy metal sheets using a great deal of force and additional aids. Thanks to state-of-the-art technology, this is now a thing of the past. Whereas in the past countless tons of material had to be stored by hand using a forklift and crane, today a large-scale storage system serves as a material store. This fully automatic storage system not only provides space for several hundred tons of sheet metal, finished parts, residual grids and pipe sections, it also supplies the machines with the material they need. Today, the punching and laser combination machines have a large number of vacuum suction cups which pick up sheets by means of compressed air and place them on the machine for processing. Finished parts are sorted and placed at a predetermined unloading point. Optimum loading and unloading of the machines is therefore also only possible here with a suitable compressed air station.

What does Pfister Metall expect from its compressed air station?

Compressed air must always be available in sufficient quantity to reliably cover the demand for a smooth production process. Equally important is the application- specific, condensate-free quality of the compressed air: This increases the operational reliability of the state-of-the-art machinery at Pfister Metall and significantly reduces maintenance costs in the company.

OLDIE BUT GOLDIE

The AIRTOWER from KAESER Compressors is a classic that has been reliably performing its services at Pfister Metall for many years. Since 1919, the KAESER brand has been synonymous with the quality and lasting reliability of particularly durable compressed air equipment. The AIRTOWER model used at Pfister Metall shows more than ever that customers can rely on the KAESER brand. KAESER is also constantly innovating, and the AIRTOWER has since been superseded by the premium AIRCENTER model. AIRCENTER compressed air stations offer customers complete solutions in premium quality that do not require much space.



KAESER AIRTOWER
Bildmaterial: KAESER Kompressoren SE



Punch-laser combination machine with storage system.
Both machines require compressed air.
Picture source: Pfister Metall

Energy efficiency is the maxim

For Pfister Metall, sustainable, resource-saving operations are of utmost importance. As part of an operational modernization, the company quickly realized that a new compressed air station could open up huge saving potential. A previously older piston compressor was to be replaced due to its high mileage in order to prevent age-related failure. The piston compressor was replaced by a KAESER AIRTOWER 26 rotary screw compressor.

Friedrich Pfister, managing partner, is also enthusiastic and convinced by the reliable function and longevity of the unit. „By modernising the compressed air system, we have been able to achieve considerable energy savings in our company to date. For many years, the AIRTOWER has fulfilled all the requirements necessary for a state-of-the-art-machine park: high reliability, condensate-free compressed air quality, low energy consumption as well as a low noise level. In a company like ours, compressed air is as important as electricity,“ sums up Friedrich Pfister with satisfaction.