



Air compressors are the backbone of industrial units. Often referred to as the fourth utility, along with electricity, water, and natural gas, compressed air is one of the most important energy sources for manufacturing units.

The self-generating energy capacity of air compressors is among the most impressive features that give it the term "phantom utility". There are mainly two types of air compressors in the market: piston and screw. In this blog, we write the ultimate guide to piston compressors. Read till the end to learn what you must know about piston compressors.

### What Is a Piston Compressor?

As the name suggests, a piston compressor is powered by motor-driven crankshafts that work in a reciprocating manner. Most commonly found in workshops, garages, and factories, a piston compressor works with the principle of positive displacement.

Meaning, one or more pistons work in sync to draw in, compress, and store atmospheric air into the storage tank. This back-and-forth, or reciprocating motion, is highly effective for intermittent compressed air applications. Self-acting suction and discharge valves in piston compressors effectively control the airflow to ensure consistent, high air pressure.

### The Benefits of Using Piston Air Compressors

Screw air compressors are indeed perfect for continuous operations. However, the benefits of piston air compressors are recognised by industries worldwide. This makes piston compressors one of the most popular choices in the industry for specific intermittent applications. Here are some of the most common and significant benefits of [piston air compressors](#) .

#### Cost-Effective

When compared to screw air compressors, piston compressors are relatively inexpensive to source. For small and medium-sized businesses that are sensitive to higher investment, piston compressors prove to be a great asset.

#### High Pressure

For heavy-duty applications, you need a reliable air compressor that offers high air pressure. Piston air compressors power everything from pneumatic impact wrenches and spray guns to sandblasting equipment, hydraulic lifts, and industrial machinery.

### Easy Maintenance

One of the most significant problems faced by air compressor owners is maintaining it in top-notch condition. Easy maintenance is a feature that makes piston air compressors highly sought after. The minimal parts, such as the piston, crankshaft, intake and discharge valves, do not demand extensive or expensive repairs. When sourced from a top-quality supplier, piston compressors deliver exceptional output in the long run.

### Intermittent Use

The start-stop mechanism perfectly aligns with operations where continuous compressed air output leads to energy wastage. Once the intended compressed air is generated and stored, piston air compressors automatically shut off. It only restarts when the pressure drops below the preset value. By operating strictly when required, piston air compressors reduce energy costs and ensure the longevity of compressor components and parts.

### Different Types of Piston Air Compressors

#### Single-Stage Compressors

As the name suggests, a single-stroke air model compresses air inside the tank by a single piston stroke. The average output of 120 and 150 PSI makes single-stage compressors ideal for moderate workloads.

#### Two-Stage Compressors

These compressors rely on two pistons to pull air and store it in receiver tanks. The larger piston pulls air and transfers it to the smaller piston through an intercooler. During this transfer, the air temperature reduces significantly.

As you might know, cooler air is more compressed and denser than piston compressors. When put through yet another compression cycle by the second piston, his colder air powers pneumatic tools and machinery with vigour.

### Conclusion

Piston air compressors offer unmatched benefits for low to medium-duty compressed air applications. SL Engineering is a one-stop destination to source the best piston [air compressors in Perth](#)

From automotive repair and maintenance to spray painting and finishing, their compressors are

perfect for a wide range of applications. Their homegrown brand, Pneumark, is Australian design approved.