

Generators, Light Towers, Compressors, and Heaters

Used Compressors Los Angeles - Air compressors are popular equipment that stores pressurized air by transferring power into potential energy. Air compressors use diesel, gasoline or electric motors, forcing air into a storage tank to pressurize it. After the tank reaches a certain limit, it is turned off and the compressed air is held in the tank until it needs to be used. Compressed air is used for many applications. Once the kinetic energy in the air tank is used up, the tank undergoes depressurization. After the lower limit has been attained, the air compressor roars back to life to begin the process of pressurization.

Positive Displacement Air Compressors There are different ways to compress air. They are divided into roto-dynamic or positive-displacement categories. With positive-displacement models, compressors force air into a chamber that has decreased volume in order to compress the air. Once the ultimate pressure is found, a port or valve opens to discharge the air from the compression chamber into the outlet system.

Vane Compressors, Rotary Screw Compressors, and Piston-Type are popular kinds of positive-displacement compressors.

Dynamic Displacement Air Compressors The dynamic air compressors consist of centrifugal air compressors and axial compressors. A rotating component discharges its' kinetic energy and it eventually converts into pressure energy. Pressurization is attained from a spinning impeller that creates centrifugal force to accelerate and decelerate contained air. Heat is generated by air compressors and these machines need a heat disposal method, generally with some form of air or water cooling component.

Atmospheric changes are also taken into consideration during compressor cooling. Many factors need to be considered for this kind of equipment including the power available from the compressor, inlet temperature, the location of application and ambient temperature.

Air Compressor Applications Numerous industries rely on air compressors. Air compressors are used to provide pneumatic power to equipment such as air tools and jackhammers, to fill tires with air, to supply clean air with moderate pressure to divers and much more. Copious amounts of moderate pressure air are generated for numerous industrial applications.

Types of Air Compressors The majority of air compressors are either the rotary screw type, the rotary vane model or the reciprocating piston type. These types of air compressors are favored for portable and smaller applications.

Air Compressor Pumps Oil-less and oil-injected are the two main kinds of air-compressor pumps. The oil-free model depends on technical items; however, it costs more and lasts less than oil-lubed models. The system that functions without oil has been recognized with delivering better quality.

Power Sources Air compressors can be utilized with many different power sources. Electric, gas and diesel-powered models are the most popular; although, other models have been engineered to use hydraulic ports, power-take-off or vehicle engines that are often utilized in mobile applications. Often, gas and diesel-powered models are used in remote places that do not have great electricity access. Gas and diesel models are noisy and emit exhaust. Interior locations such as workshops, warehouses, garages and production facilities have power and can rely on quieter, electric-powered models.

Rotary-Screw Compressor The rotary-screw compressor is one of the most popular kinds on the market. This model of gas compressor relies on a positive-displacement mechanism of the rotary type. These units are commonly used in industrial settings to replace piston compressors for jobs that require high-pressure air. Impact wrenches and high-power air tools are common. The rotary-screw gas compression unit has a continuous rhythm; featuring minimum pulsation which is a hallmark of piston model units. Pulsation can contribute to a less desirable flow surge. In the rotary-screw model, compressors rely on rotors to compress the gas. There are timing gears affixed on the dry-running rotary-screw compressors. These components are responsible to make sure the female and male rotors operate in perfect alignment. In oil-flooded rotary-screw compressors, the space between the rotors is lubricated. This design creates a hydraulic seal and transfers mechanical energy in between the rotors simultaneously. Beginning at the suction location, as the screws rotate, gas traverses through the threads, causing the gas to pass through the compressor and leave via the screws ends. Success and overall effectiveness rely on specific clearances being achieved

between the sealing chamber of the compression cavities, the rotors and the helical rotors. Rotation at high speeds minimizes the ratio of a leaky flow rate versus an effective flow rate. Many applications including food processing plants, automated manufacturing facilities and other industrial job sites rely on rotary-screw compressors. Besides fixed units, there are mobile versions in tow-behind trailers that are powered with small diesel engines. Also known as “construction compressors,” portable compression systems are popular for sandblasting, industrial paint systems, construction crews, pneumatic pumps, riveting tools and more. Scroll Compressor A scroll compressor is used to compress refrigerant. It is popular with supercharging vehicles, in vacuum pumps and commonly used in air-conditioning. These compressors are used in a variety of places to replace reciprocating and traditional wobble-plate compressors. They are used in residential heat pumps, automotive air-conditioning units and other air-conditioning systems. This machine has dual inter-leaving scrolls that complete the pumping, compressing and pressurizing fluids such as liquids and gases. One of the scrolls is usually in a fixed position and the other scroll orbits extensively with no rotation. This dynamic action traps and compresses or pumps fluid between both scrolls. The compression movement happens when the scrolls synchronously rotate with their rotation centers misaligned to create an orbiting motion. Acting like a peristaltic pump, the Archimedean spiral is contained within flexible tubing variations’ similar to a tube of toothpaste. Lubricant-rich casings stop exterior abrasion from occurring. The lubricant diverts heat. Since there are no moving parts coming into contact with the fluid, this pump is an affordable option. With zero valves, seals or glands, this equipment stays simple to operate in maintenance terms. In comparison to other pump units, the hose or tube feature is very inexpensive.