

About Scroll Compressors

TestEquity 1016 Series, 1027 Series, and 3007C Chambers use Copeland Glacier Compliant Scroll Compressors.

Copeland Corporation has long been the recognized world leader in scroll technology for air conditioning applications. This leadership role continues to expand, as Copeland is now the first U.S. manufacturer to introduce a scroll compressor line optimized for commercial refrigeration -- Glacier Compliant Scroll.

With millions of installations and several scroll-dedicated manufacturing plants worldwide, Compliant Scroll has proven to be the most reliable, most efficient and quietest compressor technology available today. Copeland's exclusive product design features both axial and radial compliance, which allows the compressor to be more tolerant of liquid refrigerant or debris. Compliant Scroll compressors perform at higher efficiency levels than reciprocating compressors, and last longer over time. Copeland's scroll compressors have 50% fewer moving parts, which increases reliability and reduces sound levels. They also operate without suction valves, for added reliability and ease of maintenance.

Reliability

Copeland Scroll compressors are the most reliable compressors available.

Efficiency

Copeland Scroll compressors achieve high efficiencies due to 100% volumetric efficiency during the compression process. Their patented scroll design operates under continuous flank contact, maintained by centrifugal force. This minimizes gas leakage and maximizes efficiency.

Reduced Sound Level

Copeland Scroll compressors function with fewer moving parts, and no discharge or intake valves. The scroll design allows several pockets of gas to be compressed simultaneously providing a smooth, nearly continuous compression cycle. This enables the Copeland Scroll compressor to operate more smoothly and quietly, with less vibration.

How a Scroll Compressor Works

Unlike reciprocating technology with many moving parts, the Copeland scroll compressor has one scroll or spiral orbiting in path defined by a matching fixed scroll. The fixed scroll is attached to the compressor body. The orbiting scroll is couple to the crankshaft in orbit rather than rotated. The orbiting motion creates a series of gas pockets traveling between the two scrolls. On the outer portion of the scroll the pocket draw in gas, then move it to center of the scroll where it's discharged. As the gas moves in the increasing smaller inner pocket, the temperature and pressure increase to the desired discharged pressure.

