

Liebert DS Model with Optional Digital Scroll Compressor

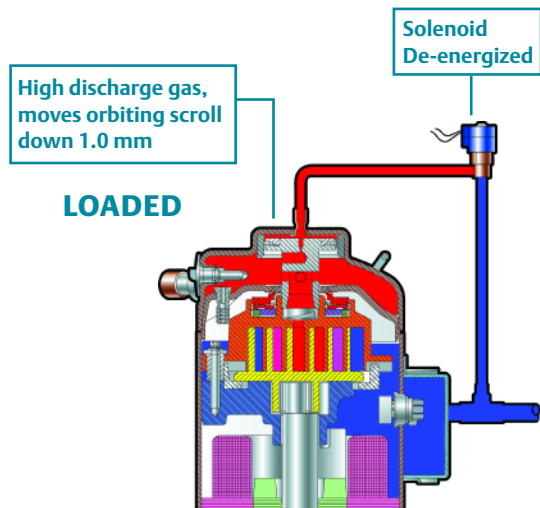
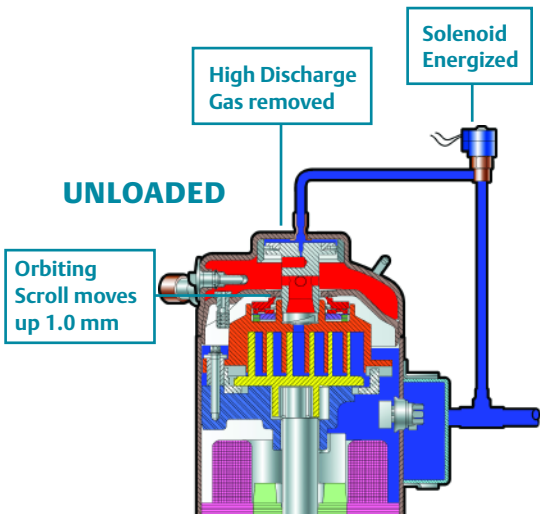
The Liebert DS precision cooling system offers many operation options; the optional Digital Scroll Compressor uses the latest control technology to deliver precise operation and higher energy efficiency.

The Copeland Digital Scroll modulates a solenoid which loads and unloads the scroll members (orbiting scroll moves up). This design enables the Digital Scroll to manage capacity modulation from 10% to 100%, significantly lowering energy consumption.



Key Features

- Copeland Digital Scroll reduces power consumption linearly as it modulates capacity, unlike traditional modulation technologies that consume close to full-load energy no matter what the required capacity.
- Copeland Digital Scroll design eliminates traditional pistons and valves that add weight and energy loss.
- Copeland Digital Scroll achieves 100% volumetric efficiency, which provides for reduced energy costs as well as reduced noise, size and weight.
- Electronically controlled solenoid modulates scroll capacity from 10% to 100%.

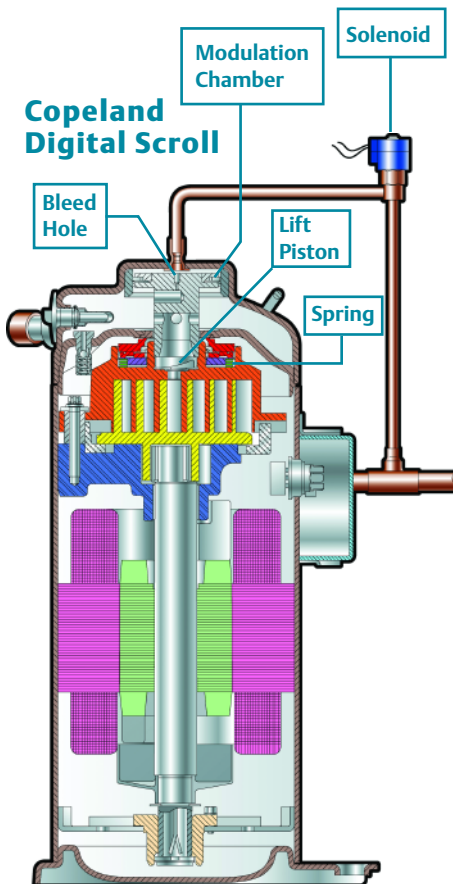


The digital scroll operates with two stages: The loaded state and the unloaded state. By electronically varying the unloaded and loaded state (energizing and de-energizing the solenoid), the capacity can modulate between 10% to 100%.

Unloaded state: solenoid energized, allowing “lift piston” to move rotating scroll away from fixed scroll, which creates a no capacity and no mass flow condition.

Loaded state: solenoid de-energized closed, allowing chamber pressure (high pressure gas) to increase pressure on lift piston, which moves rotating scroll closer to the fixed scroll, increasing capacity and mass flow.

Note: High discharge gas that is bled from high side to low side is minimal.



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