

### **PROTOCOL HE for High Efficiency Refrigeration**

Bridgeton, MO – (February, 2006) – Hussmann, a business unit of diversified industrial company Ingersoll Rand, is offering the Protocol HE refrigeration system to help food stores reduce energy and other costs. The patented Protocol refrigeration concept, developed and introduced by Hussmann in 1993, uses compact multiple compressor units distributed throughout a retail store. To reduce piping runs and refrigerant, each unit is placed reasonably close to the display cases being refrigerated.



The newer Protocol HE (High Efficiency) series incorporates vapor injected ZFKV scroll compressors for low temperature applications, and the ZBKC series scrolls for medium temperature. This combination of scroll compressors results in the most energy efficient refrigeration system available in most applications.

The low temperature Protocol HE series includes vapor injected ZFKV scroll compressors in a parallel configuration. The economizer cycle enhances the system performance by subcooling the liquid refrigerant via “mid-pocket” interstage injection.

The ZBKC series of scroll compressors have been specifically designed for HFC medium temperature application. The design has been optimized to provide improved efficiency at lower condensing temperatures while maintaining efficiency and capacity at typical design conditions.

Other advantages of Protocol systems, when compared to traditional back room systems, include a smaller refrigerant charge, less piping and braze joints, fewer leaks, lower installation costs and no need for a large machine room.

Hussmann, a global manufacturer of refrigeration and food merchandising equipment, operates as part of the Ingersoll Rand Climate Control Technologies Sector. Providing equipment and services to manage controlled-temperature environments for food and other perishables, Ingersoll Rand Climate Control Technologies encompasses both transport and stationary refrigeration solutions. In addition to Hussmann, its product brands include Thermo King®, a world leader in transport temperature control systems.

Ingersoll Rand is a global provider of products, services and integrated solutions to industries as diverse as transportation, manufacturing, food retailing, construction, and agriculture. With a 135-year-old heritage of technological innovation, Ingersoll Rand helps companies be more productive, efficient and innovative.

For more information, visit [hussmann.com](http://hussmann.com) and [ingersollrand.com](http://ingersollrand.com).