



## VARIABLE SPEED COMPRESSOR TECHNOLOGY

The introduction of speed control for refrigeration compressors is one of the major developments in recent years. Brought about by the rising cost of energy, speed control perfectly matches electrical power input with cooling capacity output.

The capability of controlling speed is leading to a new approach in the design of refrigeration systems. During periods of high cooling demand the compressor speed will increase which in-turn increases the flow of refrigerant through the evaporators thereby meeting the demand. The opposite is also true during periods of low demand.

Variable Speed Compressor offer additional benefits.

- Smaller compressors can be selected due to the “speed up” capability.
- Energy savings are realized because the power input to the compressor is directly related to its speed. Once the temperature set point has been achieved the compressor slows down and power input drops off.
- Reduction of inrush current at start up is reduced due to “soft start” behavior.
- The cooling process is optimized by the continuous speed adaptation; a far more precise cooling process control is achieved.
- Increased reliability. The number of compressor stop/starts is drastically reduced, leading to a reduction in the mechanical and electrical stresses suffered by a compressor.
- Reduced sound nuisance. At night, when cooling demand is usually low, the compressor speed will decrease resulting in lower system operating sound levels.

Reco has partnered with Danfoss and Bock to introduce variable speed compressors into the South African market. Maneurop VTZ and Bock EFC offer integrated compressor/drive technologies that will be incorporated into Reco’s Friga System pack solutions in order to meet the energy efficiency demands of the future.



**Maneurop**  
RECIPROCATING COMPRESSORS



**BOCK**  
COMPRESSORS

**Friga**  
**Systems**

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