

DriveBlok Intelligent AC Motor Control Package

Efficiency Controlled

Compact, energy-saving and packaged with “tons” of features, Parker’s DriveBlok product takes compressor control to the next level, transforming a standard AC motor into a highly controllable device at a fraction of the cost. The innovative design features precise rotational speeds that can be adjusted at any moment and it does not require expensive feedback devices.

Adding Parker’s high-performance DriveBlok into a heat pump design provides increased coefficient of power (COP), extended product life and greater consumer appeal.

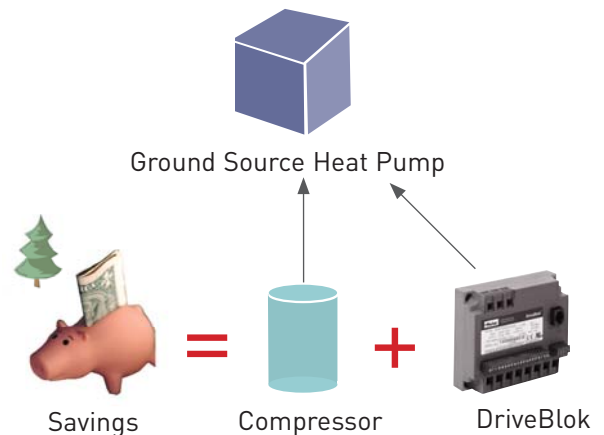


Efficiency Through Variable Speed Control:

Problem: Starting and stopping an AC motor causes large transient voltage and current inrushes that decrease energy efficiency. Operating the motor at a single speed also creates inefficiency.

Solution: Vary the speed of the compressor for fluctuating loads to avoid frequent starts and stops

- Motor-starting parameters control current to the motor during start-up
- Acceleration parameters for precise acceleration control manage rotational speed of motor as it accelerates to desired speed
- Sensorless Flux Vector technology provides high level of motor-velocity control
- Jump speed settings lock out certain speeds that might cause unfavorable vibration
- Intelligent Stop Modes: Controlled or Coast
- Efficiency Mode dynamically reduces/increases the power output to the motor as the load requires, when enabled, reducing power and noise



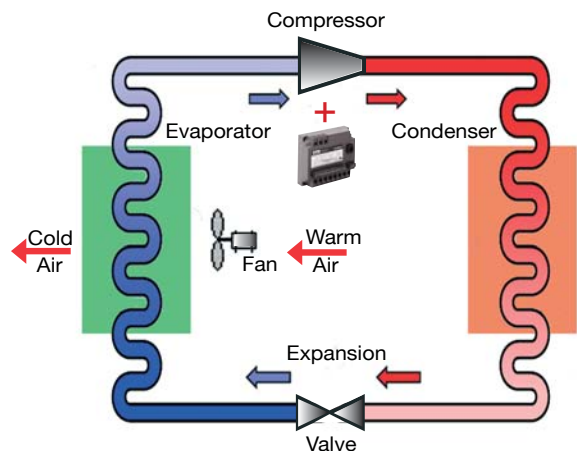
Adding the Parker DriveBlok to your existing ground source heat pump design will increase efficiency by up to 5%, reducing energy costs

Increased Solution Life Through Motor Protection:

Problem: Damage to the compressor motor

Solution: Smarter electronics

- Motor load limiting technology monitors and protects the AC compressor
 - ✓ Current and torque monitoring
 - ✓ Voltage and speed checking
 - ✓ Motor temperature protection



DriveBlok Features & Specifications

Features

- SensorlessServo™ control of brushless permanent magnet motors and three-phase AC induction motors
- Speed and torque mode operation
- Flying start for AC induction motor
- Line drop-out ride-through
- PC-based set-up utility
- Linear and S-curve acceleration profiles
- Flexible digital inputs and outputs
- 4-20 mA current loop: Speed ref, torque ref, load limit
- +/- 10V Input: Speed ref, speed & direction ref, torque ref, load limit
- Three programmable outputs for data monitoring
- Eight programmable digital inputs – multi-function, user definable
- Two high-speed digital inputs
- Two open collector, two relay outputs



Specifications

Max. Frequency:

- 434 Hz

Min. Speed:

- 1% of base speed, induction motor
- 3 to 5% of no load speed, BLDC

Speed Regulation:

- Typically +/- 1 RPM

Speed Accuracy (0-rated load):

- Typically +/- 0.1% w/ BDM +/- 0.5% w/ ADM, as % of base or no load speed*

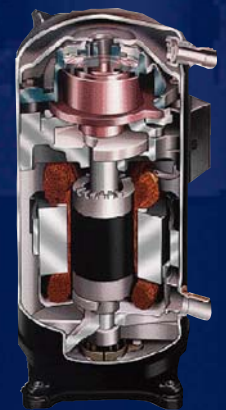
Constant Torque Speed Range, induction motor:

- 100:1

Torque Response:

- Typical 1.5 ms to 90% of commanded value

* Actual results based on motor type, construction and application.



DriveBlok Module	Current	Power	Supply Voltage
	Amps RMS	Hp	
1001C	4	0.5	120V+/-10%
1002C	7.2	1	
1003C	10.4	1.5	
1001D	3.6	1	200/240V+/-10%
1002D	6.8	2	
1003D	9.6	3	
1005D	15.2	5	
1001E	1.8	1	380/480V+/-10%
1002E	3.4	2	
1003E	4.8	3	
1005E	7.6	5	