

SAF Drive Systems Ltd.

OP-STOP SERIES: DC Injection Brakes

ELECTRIC BRAKES FOR AC MOTORS

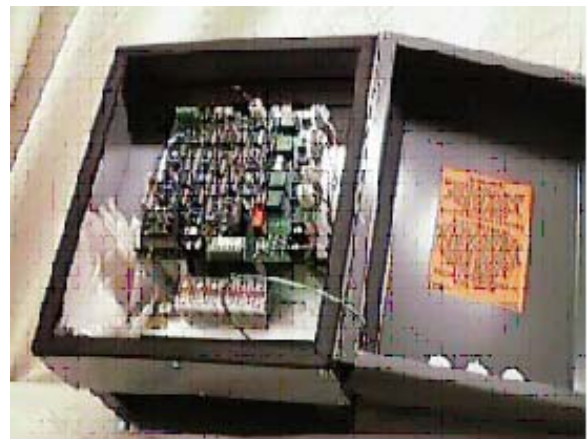
The **OP-STOP** DC Injection (DCI) brake module is a full-featured braking unit that provides smooth braking of AC induction motors. SAF's DCI offers adjustable braking through the use of closed loop current control, which, unlike mechanical brakes, will not wear. The OP-STOP electric brake delivers high levels of braking torque by injecting controlled DC into two motor phases.

The OP-STOP can also be used effectively in situations where there are no visible means of determining whether or not the motor has stopped. In such a case, a zero speed detection switch can be installed on the motor to provide the OP-STOP with a signal to disable braking.

SAF's OP-STOP also reduces the stand-by time of operators since workers may never leave a shingle machine or clipper saw unattended while the saw is in motion.



Safety, zero-maintenance, cost, ease of installation, simplicity, adaptability and performance are just some of the OP-STOP's advantages. Please contact your local SAF representative for more information.



SAF OPAL STARTERS

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FEATURES

- ◆ Closed loop current regulation provides consistent torque, independent of the line voltage.
- ◆ Direct power connections to the OP-STOP's input and output terminals eliminate the need for power contactors.
- ◆ Suitable for all input voltages from 200 VAC to 600 VAC, 50/60Hz (No adjustment necessary).
- ◆ Full wave bridge power circuitry design uses two of the four SCRs as a "free wheeling diode" in order to maximize the DC current through the motor coils.
- ◆ OP-STOP DCI can be ordered as a built-in option to SAF's OPAL Series solid state starter, or as a stand-alone unit for use with existing solid state or magnetic starters.
- ◆ DC injection time is adjustable from 1 to 60 seconds, while full load current can be adjusted from 100% to 300% motor rated full load current. Stopping time will vary depending on these settings and the inertia of the system.
- ◆ Two year warranty

Because the OP-STOP generates DC current using an AC source, it is only effective when AC incoming power exists. For critical applications, a Universal Power Supply (UPS) or a battery back-up can be used in conjunction with the OP-STOP in order to maintain power to the brake at all times.

APPLICATIONS

Some applications where the OP-STOP is commonly used are:

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|------------|----------------|----------------|---------------|
| *Wood Hogs | *Cut-off Saws | *Grinders | *Centrifuges |
| *Chippers | *Circular Saws | *Fans | *Rubber Mills |
| *Planers | *Rock Crushers | *Presses | *Shredders |
| *Band Saws | *Conveyors | *Rolling Mills | |

SPECIFICATIONS

Power	3 phase 200-600 Volts, 50/60 Hz
Control	115 VAC, 50 Hz or 120 VAC, 60 Hz
Duty Rating	Intermittent duty, 300% for 30 seconds, once every 30 minutes
HP Ratings	Up to 800 Hp (Based on 575V)
Contacts	Relays rated at 1A, 120 volt AC
Available Enclosures	Nema 1, Nema 12, Nema 4, Nema 4 X/SS
Voltage Surge Protection	MOVs across SCRs
Ambient	40 degree C
Altitude	2000m before de-rating
Phase Rotation	Insensitive
Variable Torque	100%-300% motor full load current
DC Injection Time	1-60 seconds
Activation	Automatic with starter interlock protection
Regulation	Closed loop current regulation
Protection	Optional class J fuses for short circuit protection
Battery Back-up	Optional battery back-up for power loss protection