



INTEGRATED DRIVE SYSTEMS, LLC

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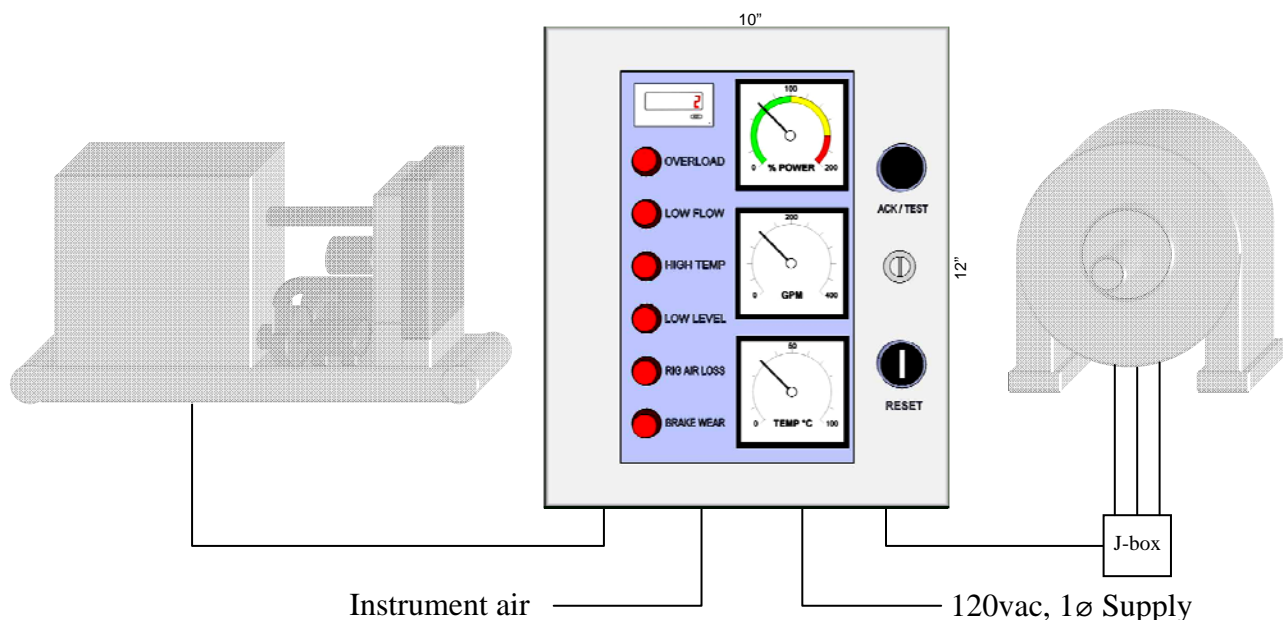
BrakeSaver™ Drawworks Brake Monitor System

Water-cooled disc brakes offer better drilling performance. But overly aggressive operation and inadequate cooling can reduce performance and shorten brake life. Integrated Drive Systems finally takes the guesswork out of brake operation with the BrakeSaver™ brake monitor system.

The BrakeSaver™ displays real-time, percent power on the brake so the driller knows how hot the brake gets when tripping. This allows the driller to focus on productivity without damaging the brake. The BrakeSaver™ also monitors critical cooling water parameters, and includes:

- NEMA-4X, SS enclosure with polycarbonate window
- Brake %Load Meter & Overload Alarm
- Brake Overload Event Counter
- Brake Water Flow Meter & Alarm
- Brake Water Temperature Meter & Alarm
- Brake Water Tank Low Level Alarm
- Low Rig Air Pressure Alarm
- (Optional) Brake Wear Alarm
- Alarm Output Relay

The clearly-visible, highly-responsive, %load meter provides instant feedback of brake load. On each overload event, the top LED illuminates, the counter increments and the PLC records the event in memory. Only the supervisor can reset the display counter (with a keyed switch), thus providing a measure of accountability. An auxiliary output contact closes on every alarm.



BrakeSaver™ includes the following external equipment (for customer installation).

- Brake Speed Sensor*
- Brake Pressure Sensor*
- Brake Flow Sensor*
- Brake Water Temperature Sensor*
- Brake Water Tank Level Switch
- (Optional) Brake Wear Switch*
- * 30 ft. multi-conductor cable with plug and J-box (to be mounted near the brake)

SPECIFICATIONS	
Dimensions	12" high, 10" wide, 8" deep, 22 lb. (DWJB is approx. 12"x8"x6")
Mounting Surface	Back or either side
Cable Entry	Receptacles w/ matching plugs are located on enclosure bottom
Power Supply	120vac, 1Ø, 50/60hz
Air Supply	¼" air fitting on bottom for dry, 120psi max. instrument air
Sensor, Speed	Inductive prox. w/ 36ppr wheel mounted in brake bearing carrier
Sensor, Pressure	0-150 psi (x 2 for dual-piston brakes)
Sensor, Flow	0-400 gpm, 3" NPT fittings
Sensor, Temperature	0-100°C
Auxiliary Contact	10A, 120vac/24vdc resistive, N.O.
Event Logging	256k memory cartridge date & time stamps each alarm event. New data over writes old when full. Mail cartridge for report by IDS.
Documentation	Manual with installation drawing is provided

PRICING

List Price (includes 5 alarms with sensors)	\$19,970.00
Option for Eaton Dual piston brake	\$1,575.00
Optional Brake Wear Alarm (excluding installation).....	\$2,600.00
Optional Purge unit (Class1/Div2/A-D, ATEX Zone 2)	\$1,976.00

Installation is NOT included. After proper installation by customer per documentation provided, IDS requires approx. one day on site for setup and calibration (per time and material at IDS' prevailing rates).

IDS can install your BrakeSaver™ system and provide the following products & services:

- Drawworks Brakes, Controls & Installation
- Cooling Packages & Installation
- Brake & Cooling System survey
- SCR/VFD Power Houses & Control Systems
- Driller's Cabins & *Autodriller*

Call 713-462-1400 or email sales@drivesystems.net for more information on the BrakeSaver™ Brake Monitor.