DYNAMIC BRAKING RESISTOR

The purpose of a DYNAMIC BRAKING RESISTOR is to slow down or to quickly stop a motor by draining excess voltage and keeping it within safe tolerances. This can help to lower the wear and tear of friction braking components, enable faster braking and eliminate the risk of a runaway due to overheating.

When removed from a power supply, most DC motors will act as electrical generators due to their permanent magnets. If a resistor is then connected as a load, the energy produced by the rotational inertia of the DC motor will be dissipated by the resistor slowing down the motor. While AC motors do not have permanent magnets in their rotors, they do have an induced magnetic field created by the rotating magnetic field in the stator. The energy lost in the stator will backfeed into the variable frequency drive (VFD), which will rise the voltage on the DC bus in the VFD. The greater the difference between the output of the VFD and the rotor's actual speed, the more energy will be fed into the VFD. If the VFD tries to brake the motor too quickly, the voltage will rise too much and damage the VFD. Most VFDs will shut down as a safety feature before this happens, and the motor will coast to a stop by friction alone. With appropriately sized braking resistors the motor can be stopped much more quickly without raising the voltage to unsafe levels.

Braking resistors with smaller ohmic values will help motors stop faster but will also dissipate more heat. This will require the use of more mass in the resistor or a heat sink to keep its temperature within a safe limit.

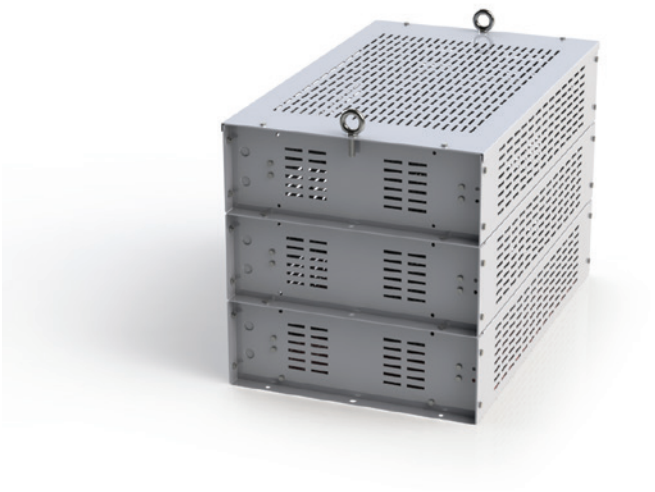
Advantages

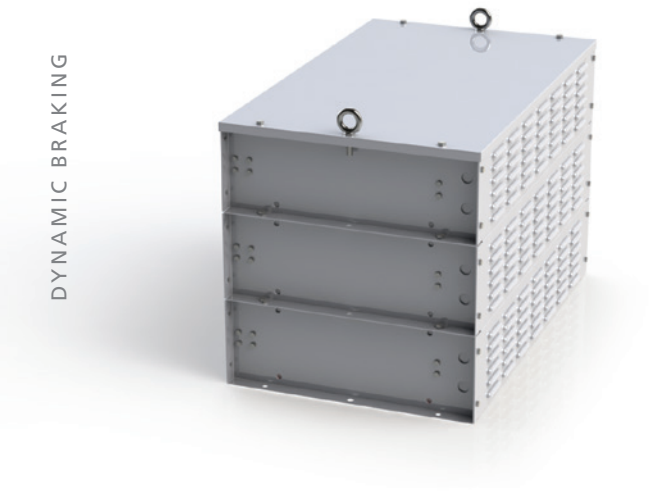
- ✔ Faster braking of DC and AC motors.
- ✔ Lower wear and tear of friction braking components.
- ✔ Keep motor voltages within safe levels.
- ✔ Eliminate risk of a runaway due to overheated friction brakes in some motors.
- ✔ Reduce wasted time during braking.
- ✔ Increase life of the equipment.
- ✔ Improved service reliability.
- ✔ Designed to absorb thermal expansions and contractions.

CUSTOMIZABLE

EFFICIENT

HIGH QUALITY





Features

- Terminal block normally closed thermal switch.
- Stainless steel nuts and bolts.
- Stainless steel and tin plated copper connectors and internal connections for positive contact and reduced oxidation.
- Optional outdoor service with removable covers and ventilated bottom screen for protection against the entrance of rodents, birds or accidental contact by personnel.
- High-temperature mica, porcelain and synthetic insulators.
- Rated, designed, manufactured and tested according to national and international standards.

Optional Features

Resistive Elements
Wirewound
Edgewound
Stamped Grid

Enclosure Materials
Galvanized Steel**
Stainless Steel
Anodized Aluminum

Enclosures
NEMA 1**
NEMA 3R
NEMA 4
NEMA 4X

Enclosure Features
Drip Hood
Elevating Stand

Optional Features
Normally open thermal switch
Forced cooling

** Standard Models

Standard Models

Type	Power	Dimensions (in)	Dimensions (mm)
DB 2	0.1-0.8 KW	15" x 8" x 5.25"	381 x 203 x 133 mm
DB 4	0.8-1.6 KW	15" x 14" x 5.25"	381 x 356 x 133 mm
DB 8	1.6-4 KW	22" x 14" x 5.25"	559 x 356 x 133 mm
DB 16	4-8 KW	20" x 18" x 8.25"	508 x 457 x 210 mm
DB 24	8-12 KW	20" x 24" x 8.25"	508 x 610 x 210 mm
DB 18-2	12-18 KW	34.5" x 21.6" x 15"	876 x 549 x 383 mm
DB 18-3	18-27 KW	34.5" x 21.6" x 22.5"	876 x 549 x 574 mm
DB 18-4	27-36 KW	34.5" x 21.6" x 30"	876 x 549 x 762 mm
DB 18-5	36-45 KW	34.5" x 21.6" x 37.5"	876 x 549 x 953 mm
DB 18-6	45-54 KW	34.5" x 21.6" x 45"	876 x 549 x 1143 mm