



# BRAKE MOTORS



# An Overview of Brake Motors

Brake motors are used wherever the application requires stopping in a limited amount of time.

A standard motor will coast to a stop where a brake will stop the motor within an expected time frame.

Applications can be for heavy duty loads, lifting applications (i.e. elevator), cranes (lifting, bridge movement), saws and grinders, conveyors and more.

# Lafert's offering of Brake Motors

- Our current stock of brake motors is :

## AAF Three Phase High Torque AC Brake

- High Torque braking
- Options for single phase and DC brake coils

## AMBZ High Torque AC Brake

- Next Generation High Torque Brake
- Also AMBY DC brake

## MS (AMS) Compact DC Brake

- Holding Brake Duty
- Lower braking torque than the AAF/AMBZ



# Lafert's offering of Brake Motors

## Common Features

- Consists of a motor with a electro-mechanical brake assembly.



- Brake coils available in multiple voltages in AC and DC
- Brakes can be wired with the motor for simultaneous operation or separately to operate independently of motor.

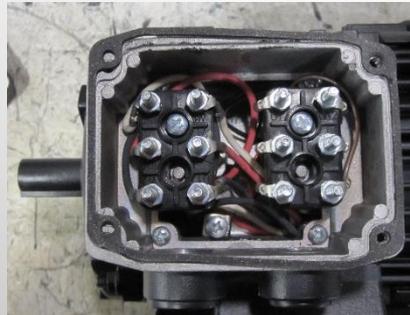


## AAF Series

The AAF series of brake motors is longer than a standard motor and has two terminal blocks inside the connection box. One for the motor and one for the brake. Larger motors may have a separate box (132 and larger) for the brake only.



AAF Motor



Interior view of terminal box with two terminal blocks

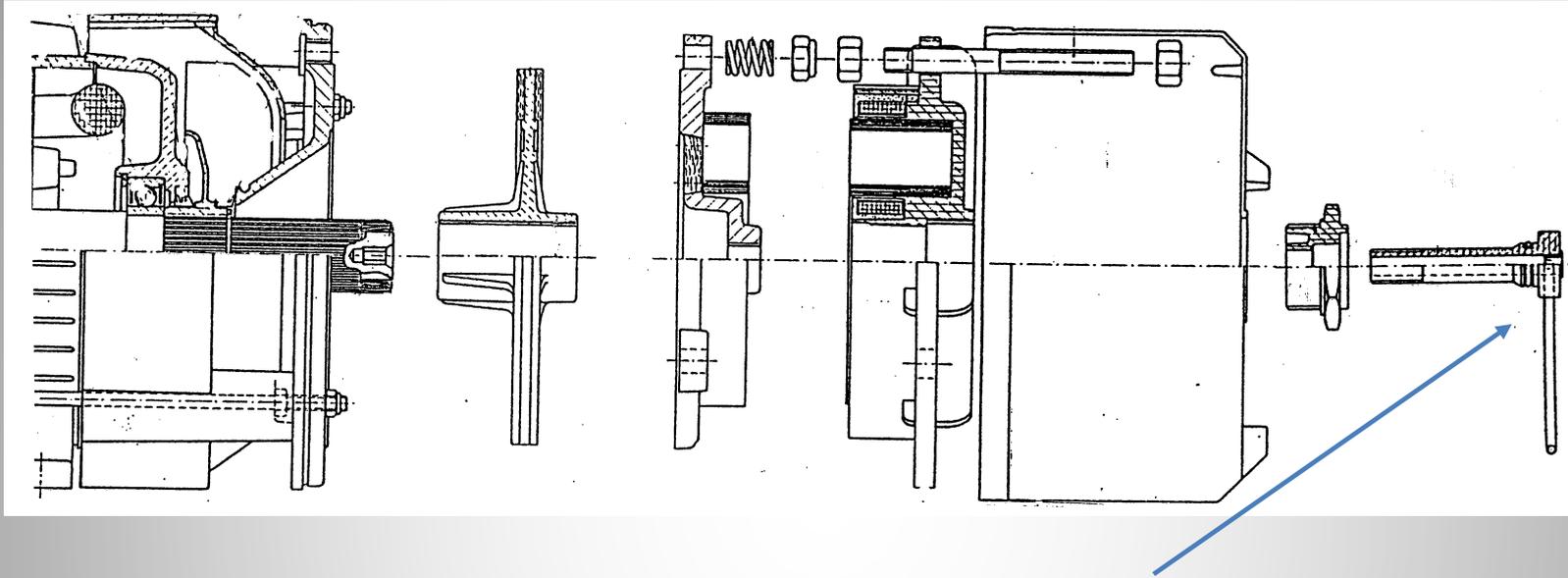


AAF132 frame with separate brake terminal box

As a standard, the brake voltage matches the motor voltage (i.e. motor and brake are usable at 230 or 460V).

The brake can be wired to the motor block so that the brake and motor operate together or the brake can be wired to a separate source to operate independent of the motor. (i.e. inverter application, need to “freewheel” motor).

As an option, we can offer alternate brake voltages (24VDC, 51VDC, 103VDC as well as custom voltages to suit unique applications) to allow the brake to be controlled separately by a different controller/source voltage.



These brake motors are supplied with a manual release key to allow the brake to be disabled without applying power.

Replacement brake assemblies and parts are available.

COMPLETE BRAKE ASSEMBLY - SPECIFY VOLTAGE	1
CONSISTS OF:	
Brake Coil	1
Locking nuts	3
Positioning nuts	6
Guide pin rods	3
Counter plate / Counter Magnet	1
Brake Pad	1
Brake Springs	3



## Features:

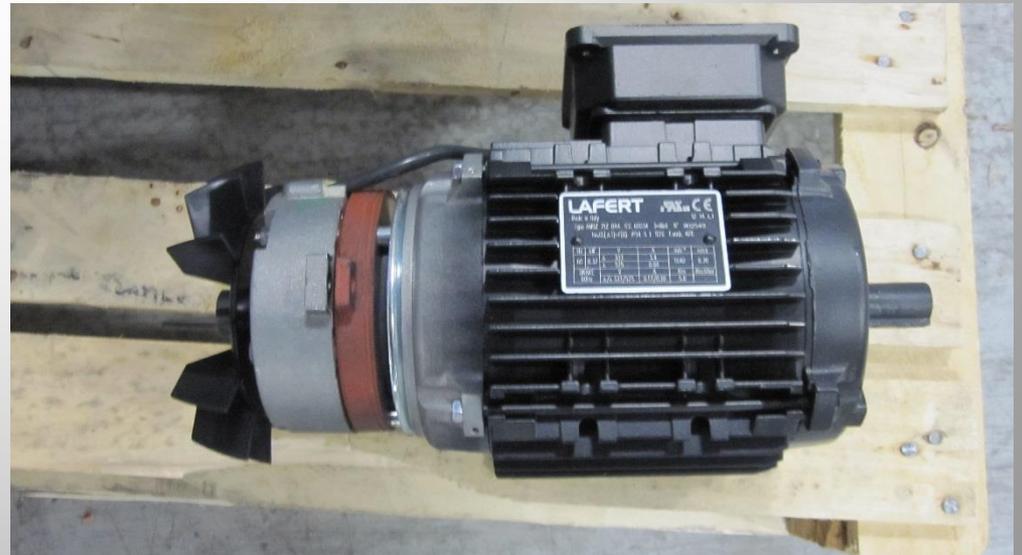
- Double braking surface
- High braking torque
- Splined brake pad/shaft
- Precision braking
- Adjustable torque
- Maximum starts per hour
- Versatile brake coil voltage offering



# AMBZ / AMBY Series

## AMBZ / AMBY Series

- Next Generation Design
- AMBZ series is a high torque AC brake motor (stocked option)
- AMBY series is a high torque DC brake motor (factory order)
- Offered in 63 to 160 frame. We are currently in transition to replace our AAF line with the AMBZ series.



# AMBZ / AMBY Series

- This line has two options for the braking torque values (high and low) which require a different brake assembly for each option. (The options are not interchangeable)
- A manual brake release handle is an offered option but not standard.

# AMBZ / AMBY Series



The release handle on this series is not standard and must be ordered.

It is possible to retro fit a release handle on the brake coil but the fan cover must be changed or machined to allow the handle to poke through.

- Compact design with similar dimensions as a standard non brake motor
- Low braking torque
- Slower reaction time than the AAF or AMBZ models
- DC rectified brake coil
- Standard coils are matched to the motor voltage but other options available including custom voltages for unique applications.
- Brake coils are single voltage input.
- Standard motors supplied with AC to DC rectifiers. Options are available for fast acting rectifiers for improved reaction time.

## Standard Configurations

MOTOR	COIL	RECTIFIER	
230/460V	206VDC	STD1	FULL WAVE
333/575V	148VDC	SS2	1/2 WAVE
ALSO AVAIL			
R40 FAST ACTING RECTIFIER			

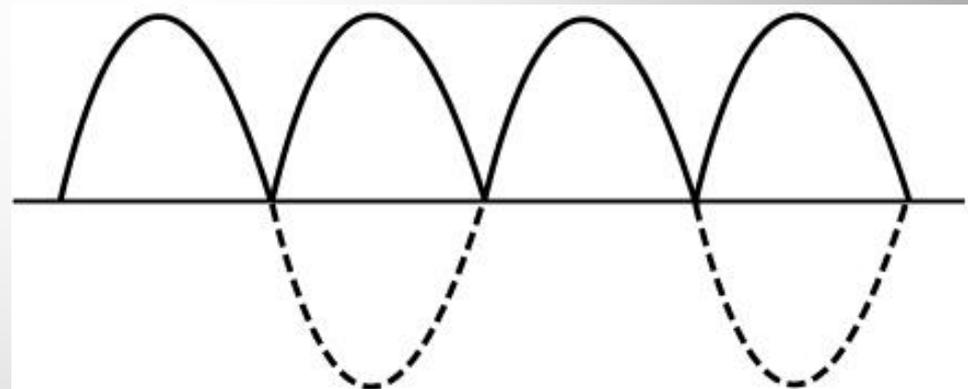
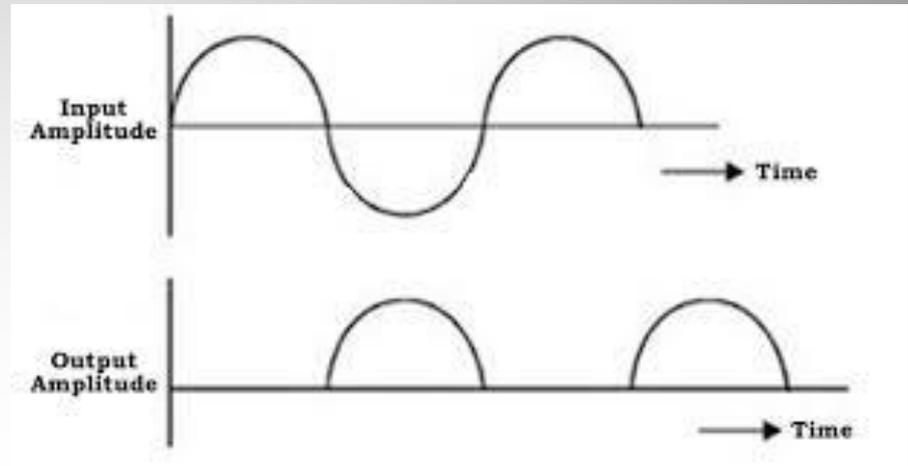


Rectifiers are used to convert AC (alternating current) to DC (direct current).

Our standard rectifiers reduce the input voltage by 15% as part of that conversion process.

So inputting 230VAC into an STD1 full wave rectifier will result in a 206VDC output.

The half wave rectifiers also reduce the input voltage by 50%. So an input of 333VAC will be cut in half and reduced by the 15% mentioned above to result in approx. 148VDC output.



## Full-wave Rectification

(View Image)



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Thanks for your attention.

Please call us for more information at

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or email [sales@lafertna.com](mailto:sales@lafertna.com)

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