

# Series 400

## PRODUCT FEATURES

# UNIQUE DUAL ROTOR BRUSHLESS CONSTRUCTION

Extends the service life and increases durability by eliminating: Brushes, Slip Rings and the Rotating Winding.

#### AIR COOLED

Air Cooled means eliminating oil lines, potential engine oil contamination and hazardous oil leaks.

#### CLEAN AIR DESIGN

Engineered for superior reliability, designed to allow clean air to flow directly into the alternator. It is supplied with a "Maintenance Free" rear mounted air precleaner, making the 400 SERIES alternators a simple drop-In and a perfect "Debris Free" installation for all cradle mount applications without the need of additional hoses for ducting clean air supply.

## HIGH OUTPUT

Capable of producing 338 Amps @ 2000 rpm or more than 73% of its rated power at engine idle makes this an efficient alternator compatible with all industry E-Fan and Hybrid Drive systems.

#### HIGH EFFICIENCY

Means less engine power required for the electrical load, directly resulting in less fuel consumption.

#### LONG LIFE BEARINGS

The 400 Series features two 40mm
High-Temperature front ball bearings, capable of withstanding extreme belt loads and temperatures imposed by today's severe applications.

# **AVAILABLE MODELS:**

- 24V- 475, 525, 550 Amps Negative or Insulated Systems.

#### **APPLICATIONS:**

Transit Buses
Motor Coaches

The DelStar Series alternators are an integral charging system of an innovative brushless design. The compact, heavy duty construction, provides increased service life expected to match the longer maintenance intervals of today's engines, while providing a performance level without parallel.





#### **SPECIFICATIONS**

• Cradle mount

• Rotation: Bidirectional

• Relay/AC terminal

• Internal or Remote Voltage Regulator

• Temperature limits:

Low - 40°C / -40°F

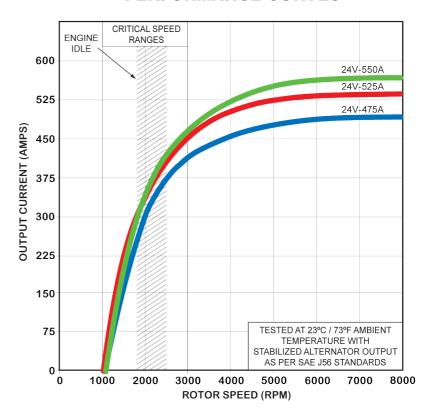
High 93°C / 200°F (with air precleaner)

High 110°C / 230°F (with fresh air intake hose)

• Speed limits: 8,000 RPM

• Weight: 94 Lbs. / 42.5 Kg.

### **PERFORMANCE CURVES**

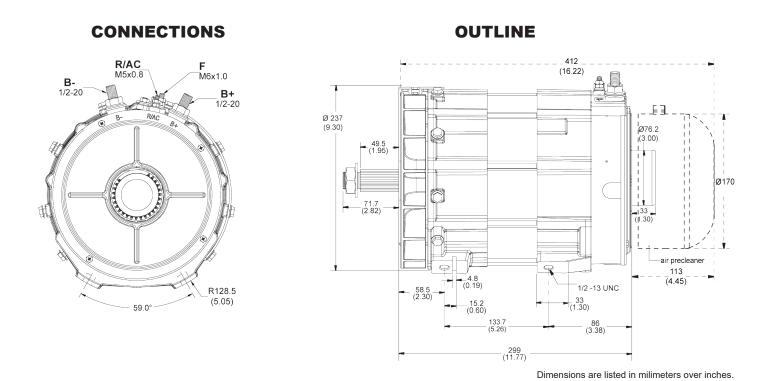


## **CRITICAL SPEED RANGES**

| 24V  | 550A | 525A | 475A |
|------|------|------|------|
| RPM  | AMPS | AMPS | AMPS |
| 1800 | 292  | 289  | 262  |
| 2000 | 338  | 335  | 303  |
| 3000 | 460  | 445  | 403  |
| 4000 | 518  | 503  | 452  |
| 5000 | 550  | 525  | 475  |

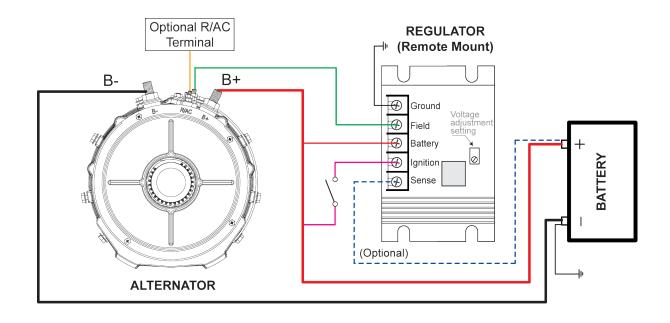






# **WIRING DIAGRAM**

**Typical Configuration** 





# Series 400

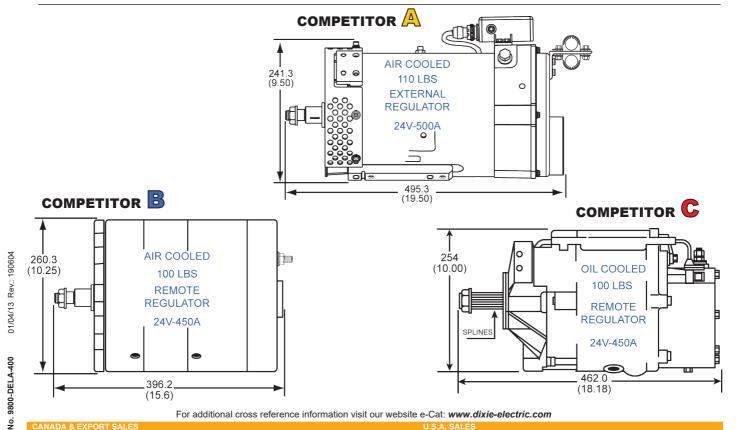
| <b>DELSTAR</b> <sup>™</sup> Brushless |                           | Delco Remy Brushless                |                                  | C.E. Niehoff Brushless              |                            | EMP Brushless                       |                      |                                     |
|---------------------------------------|---------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------|-------------------------------------|----------------------|-------------------------------------|
| Mounting                              | 400<br>Series<br>Part No. | Amps Output<br>@ 2000 / 5000<br>rpm | 50DN +<br>OIL COOLED<br>Part No. | Amps Output<br>@ 2000 / 5000<br>rpm | C800<br>Series<br>Part No. | Amps Output<br>@ 2000 / 5000<br>rpm | Power 450<br>Part N. | Amps Output<br>@ 2000 / 6300<br>rpm |
| CRADLE                                | 100-40201                 | 24V 300 / 475A                      | 8600083<br>8700091               | 270 / 450A                          |                            |                                     |                      |                                     |
|                                       | 100-40203                 | 24V 300 / 475A w                    | / HORIZONTAL O                   | JTPUT TERMINAL                      | S<br>I                     |                                     | Power 450            | 293 / 450A                          |
|                                       | 100-40202                 | 24V 335 / 525A                      |                                  |                                     | C803<br>C803D              | 325 / 500A                          |                      |                                     |
|                                       | 100-40205                 | 24V 338 / 550A                      |                                  |                                     |                            |                                     |                      |                                     |

IMPORTANT: Ensure alternator cables are adequate to handle the alternator output current. Voltage drop between Alternator B+ (Output Terminal) and Battery B+ (Positive Terminal) should not exceed 0.5 Volts drop at full alternator output.

# **COMPARED TO THE REST**

| DESCRIPTION     | DelStar |        |        | A       | B       | C       |
|-----------------|---------|--------|--------|---------|---------|---------|
| VOLTS           | 24      | 24     | 24     | 24      | 24      | 24      |
| AMPS OUTPUT     | 475     | 525    | 550    | 500     | 450     | 450     |
| AMPS @ 2000 rpm | 303     | 335    | 338    | 310     | 293     | 275     |
| WEIGHT          | 94 lbs  | 94 lbs | 94 lbs | 110 lbs | 100 lbs | 100 lbs |
| LENGTH          | 14.59"  | 14.59" | 14.59" | 19.50"  | 15.6"   | 17.83"  |
| DIAMETER        | 9.30"   | 9.30"  | 9.30"  | 9.50"   | 10.25"  | 10.00"  |
| COOLING         | AIR     | AIR    | AIR    | AIR     | AIR     | OIL     |

- LIGHTER WEIGHT
- SMALL SIZE
- MORE AMPS AT ALL CRITICAL SPEED RANGES
- A PERFECT DROP-IN FOR ALL CRADLE MOUNT APPLICATIONS
- SIMPLE TO SERVICE AND UP TO 65% LESS TIME REQUIRED



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