

# B&C SPECIALTY PRODUCTS



## QUICK FACTS

### INTRODUCING 20 AMPS OF INNOVATION

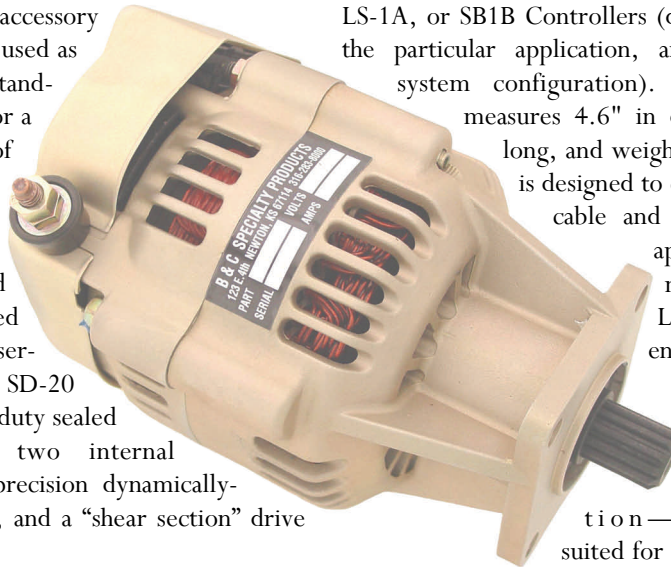
The SD-20 is a high-performance spline-driven alternator that mounts on a standard vacuum pump accessory pad. It may be used as a primary or stand-by alternator for a rated output of 20 amps @ 3500 alternator RPM.

Designed and constructed for reliable service, every SD-20 features heavy-duty sealed ball-bearings, two internal cooling fans, precision dynamically-balanced rotor, and a “shear section” drive coupling.

The SD-20 Alternator can be used in 14 volt or 28 volt applications, and is intended

for use with an external regulator. It may be appropriately matched with our LR3C-14, LS-1A, or SB1B Controllers (depending on the particular application, and electrical system configuration). The SD-20 measures 4.6" in diameter, 6" long, and weighs 5.75 lbs. It is designed to clear the tach cable and oil filter (if applicable) on most stock Lycoming engines.

Think of it as 20 amps of pure innovation—uniquely suited for use in a wide range of homebuilt/experimental aircraft. An STC/PMA version is also available.



### DETAILS MAKE THE DIFFERENCE

Attention to details can often separate a superior product from one that is so-so. Innovative design can be undone in a single moment by slip-shod materials or careless manufacturing.

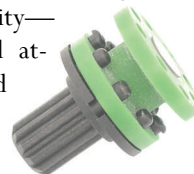
Details—even the small, unseen ones—make a big difference over time.

The attention to details in our SD-20 Alternator underscores our commitment to quality. Consider our precision-balanced rotors, for example. This center rotating mass is dynamically balanced using our computerized, two-plane balancing machine; each receives the sustained attention of a specially-trained technician. Truth be told, it takes time to accomplish a precision balance, and requires costly equipment.

Few customers ever “see” it. But it’s a detail that proves its worth over time in the form of long term reliability.

Then there is the unseen “shear section” drive coupling in every SD-20. This feature protects the engine by “uncoupling” the alternator from the drive gear—in a predictable, benign manner—if the alternator becomes damaged. While unlikely, such an event reveals the forward-thinking design behind the SD-20. It’s one “detail” that offers a crucial safeguard for YOUR engine!

Quality and reliability—both begin with careful attention to details. And that is anything but trivial to us.



#### FEATURES:

- All new materials (absolutely NO remanufactured content)
- Externally regulated
- Dynamically balanced rotor
- Two internal cooling fans
- Heavy duty sealed ball bearings
- “Shear section” drive coupling
- Weighs 5.75 lbs.

#### PRICING

SD-20 Alternator (Homebuilt)	\$695
SD-20S Alternator (Homebuilt)	\$695

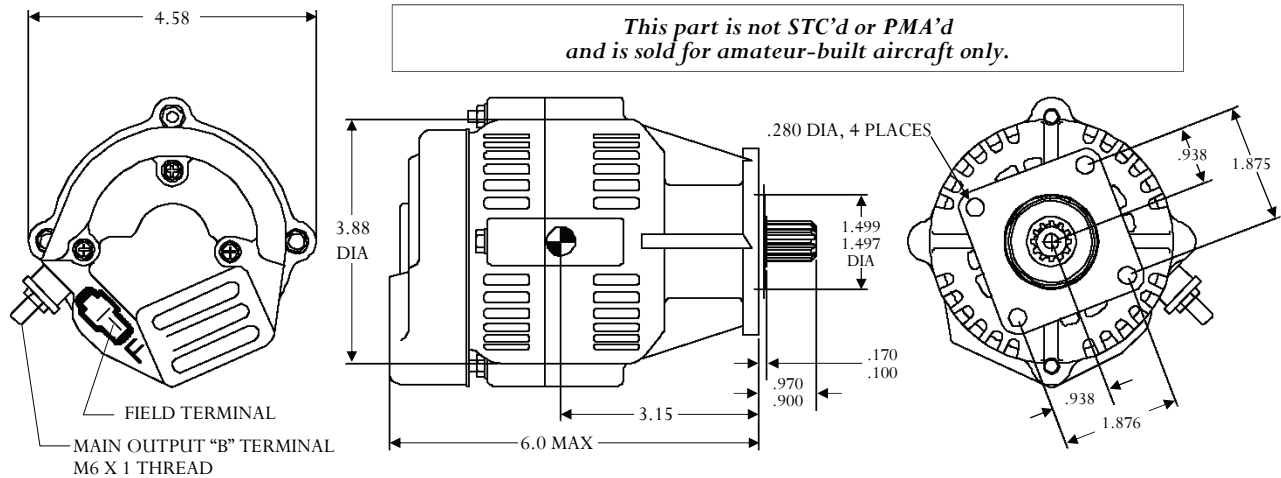
#### ALSO OF INTEREST

LR3C-14 Controller, 14v (Homebuilt)	\$228
LS-1A Controller, 28v (Homebuilt)	\$268
SB1B-14 Controller, 14v, for use w/ Stand-by Alternators (Homebuilt)	\$268
SB1B-28 Controller, 28v, for use w/ Stand-by Alternators (Homebuilt)	\$268

#### SEE PAGE 2 FOR:

- SD-20 Dimensions
- The SD-20S: Made for Tight Spaces
- Application Notes: Lycoming, Continental, and Rotax Engines

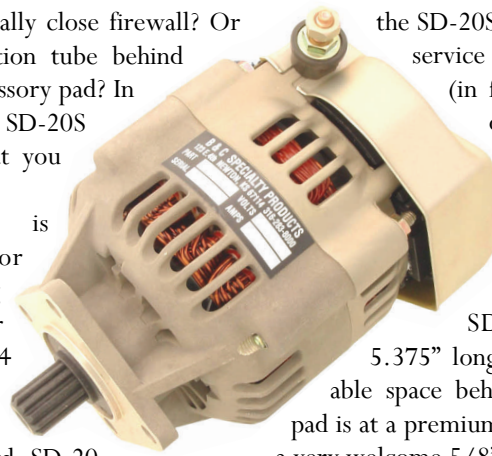
## SD-20 DIMENSIONS



## THE SD-20S: MADE FOR TIGHT SPACES

Have an unusually close firewall? Or maybe an induction tube behind the available accessory pad? In either case, the SD-20S may be just what you need.

The SD-20S is well-suited for airframes using Continental or Rotax 912/914 engines where space is limited. Like the standard SD-20,



the SD-20S is built for reliable service over the long-haul (in fact, it shares most of the same components). All that differs is the overall length: where the SD-20 is 6.0" long, the SD-20S measures 5.375" long. And if the available space behind your accessory pad is at a premium, that may come as a very welcome 5/8" difference!

Alternator RPM	ALTERNATOR OUTPUT	
	At 14.4v (Hot)	At 28.8v (Hot)
2000	15	0
2500	24	4
3000	29	12
3500	32	20
4000	34	26
4500	35	31
5000	36	33
5500	37	35
6000	38	38
7000	39	41
8000	40	43

## APPLICATION NOTES: LYCOMING, CONTINENTAL, ROTAX ENGINES

The SD-20 and SD-20S Alternators are designed to fit on AND20000-spec pads found on Lycoming, Continental, and Rotax engines. Since alternator model suitability will vary according to engine type, the following should be considered—

**Lycoming engines.** The SD-20 Alternator will fit on either the vacuum pump accessory pad, or the hydraulic pump pad, while also clearing the tach cable and stock oil filter adapter. *The*

*SD-20S Alternator, with its shorter mounting "nose," will NOT fit due to interference with the tach cable boss.* Eligible pads on these engines turn at a ratio of 1.3 to 1 of engine RPM.

**Continental engines.** Both the SD-20 and SD-20S Alternators will fit engines with an available accessory pad. Use of the SD-20S is recommended where airframe clearance may be an issue. Eligible pads on these engines turn at a ratio of 1.5 to 1 of engine RPM.

**Rotax 912 & 914 engines.** Both the SD-20 and SD20-S will fit these engines on an available vacuum pump accessory pad. It should be confirmed in advance, however, that the engine in question has been equipped with the necessary vacuum pump drive gear (some may not). Eligible pads on Rotax engines turn at a ratio of .54 to 1 of engine RPM.

