



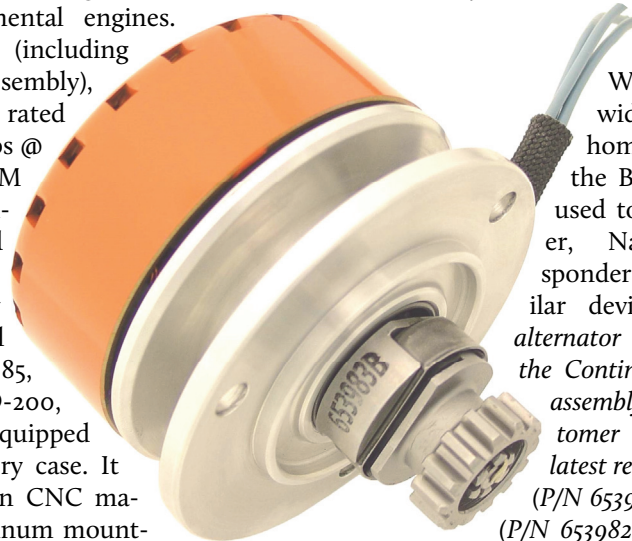
# BC433-H

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# QUICK FACTS

## JUST RIGHT — NO COMPROMISES

The BC433-H sets a new standard for light-weight, high-performance gear-driven alternators for Continental engines. Weighing 4.4 lbs. (including the drive gear assembly), the BC433-H has a rated output of 29.4 amps @ 5500 alternator RPM (roughly 2750 engine RPM), and mounts on the bottom accessory pad on Continental engines (C-75, C-85, C-90, C-145-2, O-200, IO-240, O-300) equipped with a -12 accessory case. It features a precision CNC machined billet aluminum mounting flange, and two sealed heavy-duty ball-bearings — just like you'd expect from B&C:



no short-cuts, and no compromises. Every BC433-H ships with a matching 3-phase regulator and PM/OV Kit. Well-suited for a wide variety of 14v homebuilt aircraft, the BC433-H may be used to power a starter, Nav/Com, transponder, and other similar devices. *Note: this alternator is sold without the Continental drive gear assembly, which is customer supplied. The latest revision of the Hub (P/N 653983) and Retainer (P/N 653982) is required (see "Application Notes," pg. 2). Gear installation must be performed by B&C Specialty Products.*

### FEATURES

- Permanent magnet design — no brushes or slip-rings
- Precision CNC machined billet aluminum mounting flange
- Two heavy-duty sealed ball-bearings
- Ships with PMR3A external Regulator and PM/OV Over-Voltage Protection Kit
- Exceptional reliability
- Small size — 4.078" in diameter and 3.743" deep
- Weight: 4.4 lbs.

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## SAVE WEIGHT, REDUCE MAINTENANCE

Weight and maintenance — two nearly inescapable concerns for any aircraft. How DO you effectively decrease weight and reduce common maintenance headaches? For many Continental engines, one way is to replace an older OEM gear-driven generator with a modern, lightweight alternator.



When compared with contemporary alternators, the legacy gear-driven generators

are rather hefty, tipping the scales between 9.25 lbs (Delco-Remy 1101876) and 15.4 lbs (Delco-Remy 1101898). In addition to sheer weight, these units also have the disadvantage of requiring frequent maintenance — often due to worn brushes or commutators.

In contrast, the BC433-H Alternator weighs only 4.4 lbs. — a 5 to 11 lb. weight savings — and occupies much less space overall. Better yet, it has an innovative 3-phase, permanent-magnet design that uses neither a commutator or brushes that wear over time. Think of it as a "right-sized" contemporary alternative to the legacy OEM units, offering reliable efficiency without the bulk and maintenance headaches.

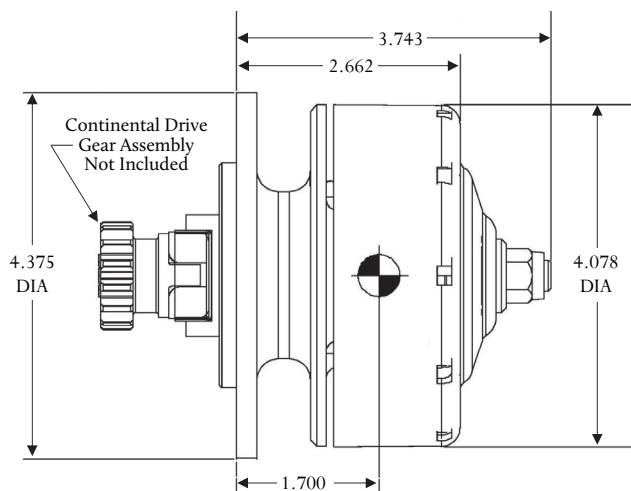
### PRICING

BC433-H Alternator, with external Voltage Regulator, 14v (Homebuilt), less generator drive gear	\$915
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### ALSO OF INTEREST

Continental drive gear components (New) --	PLEASE CALL FOR CURRENT PRICING
653982 Hub	
653983 Retainer	
530407 Sleeve	
531325 Gear	
530412 Nut	

## BC433-H DIMENSIONS AND SPECIFICATIONS



Alternator RPM	Output AMPS
6000	30.4
5500	28.8
5000	27.2
4500	25.3
4000	22.7
3500	19.3
3000	14.5
2500	8.1

Alternator RPM = 2X Engine RPM

**This part is not STC'd or PMA'd and is sold for amateur-built aircraft only.**

## A PROACTIVE APPROACH TO SAFETY OF FLIGHT\*

An in-flight emergency such as an Over-Voltage event is something that many people would rather not think about. Like being struck by lightning, few actually experience it — but those who do tend to remember it vividly.

As with any other rare but grave possibility, it is always wise to find ways of protecting yourself — and your aircraft — against an OV “lightning strike.” Careful system planning and implementation are of key importance.

It is for this reason that the BC433-H Alternator is accompanied by an external

Voltage Regulator with provision for active Over-Voltage protection. This system functions in the background during alternator operation, providing a crucial safeguard against OV events — quickly and automatically.

Each Alternator system also contains a clear-yellow warning light that will illuminate if the OV protection circuit actuates — supplying a valuable visual indication. And to enhance overall power quality (and provide filtering against radio noise), an electrolytic filter capacitor is supplied with every BC433-H, as well.

So why all the fuss? Simple. Proactive prevention and careful system planning are far better than waiting for problems to appear. And since thinking ahead really begins on the ground, when the pressure is off, it's also key to enhancing your safety of flight.

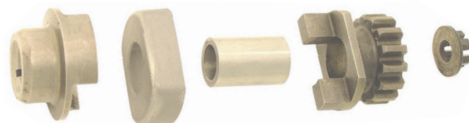


## APPLICATION NOTES: THE CONTINENTAL DRIVE GEAR ASSEMBLY

The Continental drive gear assembly is sometimes the object of a kind of “mistaken identity.” This is understandable since there have been several similar — but different — versions used in a number of engines over the years.

The BC433-H was designed with a fairly common version of these parts in mind. Still, there are a few points to consider. First, we will need the *latest* revision of the Hub (P/N 653983) for the BC433-H. Any prospective Hub should also be examined for an inside diameter

(or I.D.) of .50” — no other I.D. will work. Second, the counterpart component to the Hub, the Retainer (P/N 653982), will also need to be the latest revision. And



finally, the Gear (P/N 531325) should be confirmed to have an overall thickness of 1.20” (including the sides or tangs). Early Gears can have different dimensions in this area, and as a result will not fit

properly on the BC433-H.

For more info on the Continental drive gear assembly, including key dimensions & application notes, see our special guide at [www.bandc.com/drivegear](http://www.bandc.com/drivegear).

Part Description	Continental Motors P/N
Hub	653983
Retainer	653982
Sleeve	530407
Gear	531325
Nut	530412