

# B&C SPECIALTY PRODUCTS

"Treat Yourself to the Best!"

Celebrating 29 Years of Innovation  
Established 1980

## QUICKFACTS

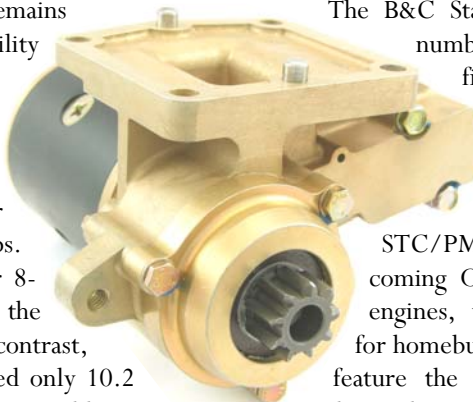
### THE ORIGINAL LIGHTWEIGHT STARTER

Imitated—but never equaled. The B&C Starter for Lycoming engines is the original lightweight alternative. Introduced over 15 years ago, this same design has provided dependable service for thousands of satisfied customers—and it remains the benchmark of reliability and genuine value.

When the B&C Starter was introduced, the typical OEM starter for 4- and 6-cylinder engines weighed 17.2 lbs. (and the OEM unit for 8-cylinder engines tipped the scales at 34.5 lbs!). In contrast, the B&C Starter weighed only 10.2 lbs. and eliminated the troublesome Bendix drive—all while providing greater torque than either of the OEM units.

Of course, other lightweight starters have

joined the market since then, and we'll be the first to acknowledge there are cheaper starters to be had. But that cuts both ways. Proven reliability offers a better value in the long term—and that is our specialty.



The B&C Starter is available in a number of configurations to fit varied applications—12v or 24v; 122 or 149 ring gear teeth; standard- or counter-rotation. STC/PMA approved on Lycoming O-235 through IO-720 engines, with models available for homebuilt aircraft, as well. All feature the same uncompromised value and unmatched reliability upon which B&C has built its reputation. Ask anyone who has one and they'll tell you: nothing else measures up to a B&C.

### UNMATCHED RELIABILITY BEGINS HERE

Designing any product involves choices. Balancing quality materials with production costs, and (in the case of aviation) balancing ruggedness with weight—every choice involves a cost. Sometimes those costs are clearly visible; sometimes they are not.

When it comes to lightweight Starters, what's unseen often makes a big difference in reliability and performance. Consider the materials that go into one, for example. Bushings, unsealed needle bearings, plastic reduction gears, permanent magnet motors—they're all choices other manufacturers have embraced. And while they may not advertise that these choices cut production expenses, or reduce only a fraction of a

pound, they're not without hidden costs.

All too frequently, such choices become compromises that pass the "point of diminishing returns." That's when failures in the field, spotty reliability, and a shortened service-life show up—and that's unacceptable, as far as we're concerned.

The B&C Starter uses only sealed heavy-duty ball bearings, all-metal gears, and an efficient series-wound motor. There are no shortcuts on quality. True, such materials do cost and weigh a bit more. But they're well worth it. Our unmatched reliability begins here.



#### FEATURES:

- Sealed Heavy-Duty Ball Bearings (no bushings or needle bearings)
- All-Metal Gears (no plastic gears of any kind)
- Electro-Mechanical Pinion Actuation (no Bendix drive)
- Efficient Series-Wound Motor (no permanent magnet motor)
- Weighs only 10.2 lbs.
- STC/PMA: O-235 to IO-720

#### PRICING

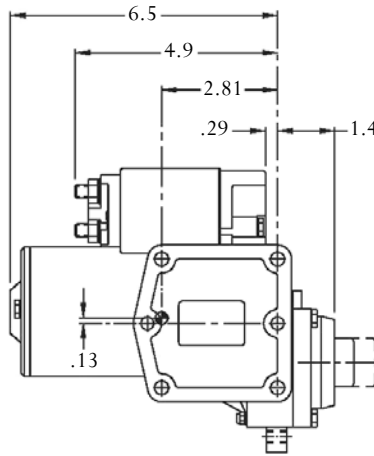
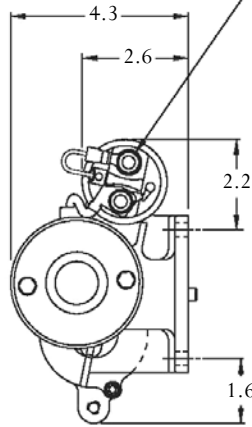
STC/PMA	
BC315-100-1	\$580
BC315-100-2	\$580
BC315-100-3	\$610
BC315-100-4	\$610
Homebuilt	
BCS206-122-12	\$550
BCS206-149-12	\$550
BCS206-122-24	\$580
BCS206-149-24	\$580
For counter-rotating versions of above ADD	\$82

#### SEE PAGE 2 FOR:

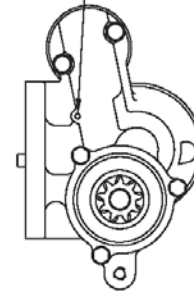
- Starter Dimensions
- Getting to Know Your Ring Gear
- Starter Configuration Matrix

## B&C STARTER DIMENSIONS

LARGE CABLE FROM STARTER SOLENOID ATTACHES HERE



1/8" X 2" DOWEL PIN INSERTED HERE TO PROVIDE TIMING MARK.



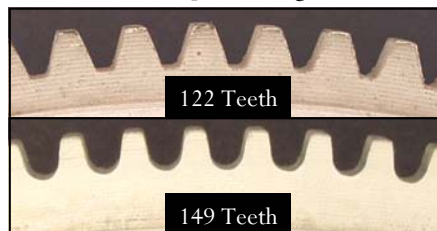
## GETTING TO KNOW YOUR RING GEAR

Lycoming engines have used one of two starter ring gears over the years, each with a different number of teeth per inch (also known as “diametral pitch,” or “D.P.”). When selecting a replacement starter, it is crucial that the pitch of the starter pinion gear matches that of the engine ring gear precisely in order to avoid equipment damage.

As a general rule, early 4-cylinder engines manufactured prior to the mid-1960’s such as the O-290, O-235, early O-320’s, and the 8-cylinder IO-720, utilized ring gears with 122 teeth, or a 10/12 D.P. Later O-320’s, and the O-

360 and O-540 have ring gears with 149 teeth, or a 12/14 D.P. Unfortunately, *engine manufacturing date alone is insufficient to guarantee the present ring gear in use*, since many engines may have had these replaced in their 40+ years in service. This is only a general indicator.

The actual shape of the gear “teeth” is



another useful general indicator, as the 122 tooth ring gear has V-shaped teeth, and the 149 tooth ring gear has U-shaped teeth (see photos at left). Close observation of the engine ring gear in question should suggest one of these two shapes, though heavy wear can obscure this visual indicator.

*If either of these general indicators leave room for doubt, it is always advisable to simply count the number of ring gear teeth.* In some cases, there is no better way to remove uncertainty than this—a small investment to insure a worry-free starter replacement.

## SELECTING A B&C STARTER FOR YOUR APPLICATION

The B&C Starter for Lycoming engines is available in 16 configurations to suit a variety of applications. Configuration options include—12 or 24 volts; 122 or 149 ring gear teeth; standard- or counter-rotating; STC/PMA or homebuilt. All feature the same “No Compromises” construction that has made the B&C Starter the benchmark of long-term reliability and genuine value.

VOLTAGE	NUMBER OF RING GEAR TEETH	STC/PMA MODEL NUMBER	HOMEBUILT MODEL NUMBER	
12	122	BC315-100-1	BCS206-122-12	STANDARD ROTATION
12	149	BC315-100-2	BCS206-149-12	
24	122	BC315-100-3	BCS206-122-24	
24	149	BC315-100-4	BCS206-149-24	
12	122	BC315-100-5	BCS206-122-12 C/R	COUNTER-ROTATING
12	149	BC315-100-6	BCS206-149-12 C/R	
24	122	BC315-100-7	BCS206-122-24 C/R	
24	149	BC315-100-8	BCS206-149-24 C/R	

©2004-2009 B&C Specialty Products, Inc., 123 East 4th Street, P.O. Box B, Newton, KS 67114. Web: [www.BandC.biz](http://www.BandC.biz). “QuickFacts” is offered as a customer service by B&C Specialty Products, and is intended to assist customers in making informed purchasing decisions. The content contained herein is of a general educational nature only, and is not intended to take the place of consultation with a competent and certified A&P mechanic.