

Enya SS-25 R/C & SS-25BB R/C



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Those of you who have been reading the ads and new product reports in the various model magazines lately will know that Enya is the latest model engine manufacturer to enter the sport engine field with a line of Schnuerle ported engine designs. Although Enya has offered sport type engines in years past, they have always been of the cross-flow design rather than more modern Schnuerle porting. Enya's latest "Super Sport" series is now comprised of no less than seven different engines that include a .25 and .30 cubic inch engine using a bronze sleeve bearing and cast iron piston with steel liner, .25 and .30 double ball bearing version also using the cast iron piston and steel sleeve combination, a .25 double ball bearing **engine with a chrome plated** aluminum liner, and a double ball bearing .30 with ringed aluminum piston available in both conventional aircraft and helicopter versions. Actually the term "sport" is being used rather broadly as the sleeve bearing .25 and .30 would be the only engines to really fit this category the other engines in the line falling more into the high performance category. This past month the **RCM office received a new Enya Super-Sport 25 and Super-Sport 25BB**, so let's take a brief look at some of the **construction features and differences between these two engines**.



Enya Super Sport 25 (plain bearing).



Enya Super Sport 25BB (ball bearing).

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Engine Clinic

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Following previous Enya design **practice, both engines feature pressure die-cast aluminum crankcases with removable front housing and non-removable** back covers, i.e., the back cover is cast as part of the crankcase. The SS-25 uses a plain bronze bushing to support **the one piece hardened steel crankshaft whereas the SS-25BB crankshaft is supported by** 24mm x 12mm ball bearing at the rear and a .750" x .250" (non-metric) single shielded ball bearing at the front. The SS-25BB, being intended for higher rpm operation, has slightly later opening and closing crankshaft intake port timing opening 45° after BDC and closing 55° after TDC whereas the SS-25 sleeve bearing engines crank port opens 35° after BDC and closes 45° after TDC.

Both engines use cast iron pistons running in nitrate hardened steel liners and cast aluminum connecting rods unbushed at either end. A single exhaust port flunked on either side with a single transfer port and a single boost port opposite the exhaust port compose the Schnuerle configuration. The intake and exhaust ports in the SS-25BB sleeve have been raised approximately .015" over the sleeve bearing SS-25 allowing the intake and exhaust ports to open slightly earlier. **This .015" raise results in the SS-25BB** having an exhaust duration of 152° and intake duration of 124°, whereas the SS-25 sleeve bearing engine has a 148° exhaust duration and 120° intake duration. The boost port in both engines is timed to open approximately 2° after the transfer ports.

Both engines utilize the same head that has a shallow hemi-shaped combustion chamber with narrow squish band and a cast-in brass glow plug thread insert. The brass thread insert is always a nice feature as it greatly lessens the chance of stripping the glow plug threads.

The SS-25 uses Enya's standard rotating barrel, air bleed type carburetor but the SS-25BB uses Enya's more sophisticated G 5.5 automatic fuel metering carburetor. The G 5.5 carburetor also has a somewhat larger intake size .215" versus .195 for the standard carburetor used on the sleeve bearing SS-25.

Both engines are supplied with mufflers but the muffler used on the SS-25BB is considerably larger in volume and utilizes a tail pipe opening diameter of .295" versus .235" for the SS-25. With the SS-25BB being intended for higher rpm operation, the larger volume muffler with larger outlet has been used to reduce power loss.

Enya lists the high speed rpm range as 8.000 - 15.000 for the SS-25 and 8.000 - 16.000 for the SS-25BB. Idle rpm for both engines is 2.500 – 2.800. Recommended propeller sizes are 10" dia. with 4" to 6" pitch, or 9" dia. with 6" to 7" pitch. The SS-25BB favors the smaller propeller sizes due to its need to turn a little faster to develop its maximum horsepower. Enya lists the maximum power for the SS-25 as .65PS without the muffler, and .55PS with the muffler, and .75PS without the muffler for the SS-25BB, and .65PS with the muffler. PS stands for Pferdestärke or metric horsepower --- a term many Japanese and European engine manufacturers have been using lately.

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We found both of the engines to be of very high quality and with excellent machine work and finishes typical of Enya. For those looking for an inexpensive sport engine in the .25 to .30 cubic inch displacement size, you might want to consider the Super Sport 25 or 30. If you want higher performance and an engine with a ball bearing crankshaft (at higher cost), then you might consider the Super Sport 25BB or 30BB.

More: https://flyinghlsat.com/search.php?search_keywords=Enya-Engines