

Engine Review Round Up

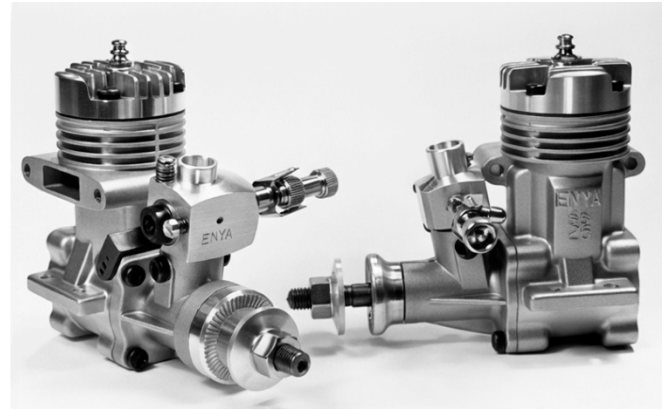
ENYA SUPER SPORT 25 & 25BB

The two largest Japanese model engine manufacturers, O.S. and Enya, list incredibly large ranges of engines, both two stroke and four stroke. Every year, their numbers seem to increase and, as of April 1986, these two manufacturers had, between them, no less than 134 models on their product lists. Among the latest additions to the Enya range are the new "Super-Sport" series of small two stroke engines, two of which are the SS-25 and the SS-25BB described here.

Interestingly, although Enya has produced two stroke engines in practically every popular displacement group from .049 cu in. to .60 cu in. (plus some odd in between sizes and a .63 as well) along with four strokes from .35 to 1.20 shortly to be joined by a 2.4 cu in. Vee Twin this is the first time the factory has offered a .25.

Marking a departure from previous Enya sport type engines, the Super Sport models have Schnuerle scavenging in place of crossflow scavenging, but nevertheless remain distinctively "Enya" in their outward appearance. The traditional Enya layout, featuring the cylinder casing in unit with the crankcase, but with a detachable front housing rather than a detachable back plate, is continued, as are the familiar deeply finned cylinder head shape and machined bar stock carburetor body. These, along with a solid square cut appearance, are features that can be traced back to the Enya 19 and 29 models of the Fifties and Sixties, yet the current models look, and are, modern designs in all respects.

Although the suffix letters "BB" might appear to suggest that the use of ball-bearings is the only thing that distinguishes the 25BB from the 25, the differences between the two models are rather more than this and the 25BB is considerably higher priced.



Super-Sport SS-25BB (left) and SS-25 are just two models in a new eight-model Enya two- stroke range.

For example, whereas the 25 is fitted with a standard Enya carburetor with an air bleed for adjusting the idling mixture, the 25BB has the more sophisticated Enya G5.5 carburetor. G Type carbs, as Enya users are aware, feature fixed automatic fuel metering that matches fuel delivery to throttle opening but retain an air bleed for fine-tuning the idle mixture. The G5.5 carburetor also has a slightly larger effective choke area in the interests of increased top end power.

The crankshaft of the standard 25 has an 11.5 mm diameter main journal that runs in a full-length bronze bush. It has an 8.5 mm bore gas passage and a 12.5 mm long valve port. The crank web is 8.4 mm thick and its flanks are cut away each side of the 5 mm solid crankpin for counterbalancing.

The 25BB shaft has a 12.0 mm main journal and runs in a 12x24 mm rear, and a 12x12 mm in. front, ball journal bearings. It has the same size gas passage, but its slightly shorter (11.0 mm) valve port is wider, thereby extending the intake period.

Both engines use a ringless cast-iron piston running in a hardened steel cylinder liner having a 1.8 mm wall thickness, through which there are angled and inclined Schnuerle ports flanking an unbridged exhaust port, with a single upwardly inclined third port diametrically opposite. Both engines also use unbrushed conrods and identical cylinder-heads in which a shallow bowl shaped combustion chamber is surrounded by a 2.8 mm wide flat squish band.

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

The mufflers supplied for use with these two engines are different.

Both are conventional non-baffled expansion chambers, but the M250 has a volume of 24 milliliters with a 28 sq mm outlet area, whereas the M251, for the 25 BB, has a 40 ml volume and a 45 sq mm outlet area to reduce power loss.

Prop sizes recommended by the manufacturer are 10 in. diameter of 4 to 6 in. pitch, or 9 in. diameter of 6 to 7 in. pitch. These apply to both engines since the more powerful 25BB needs to be allowed to run a little faster. Power outputs, quoted in PS (Pferdestärke) or metric horsepower, are indicated in the data table.

Peter Chinn, c/o Model Airplane News, 632 Danbury Rd., Wilton, CT 06897. ■

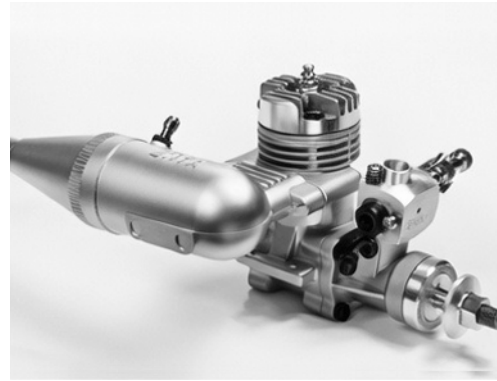


Super Sport 25 standard model has bronze main bearing and air bleed type carburetor.



Externally, Super-Sport series retains a strong family likeness to previous Enya two-strokes.

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



SS-25BB features twin ball-bearing shaft, G- Type carburetor, and larger M251 muffler for reduced power loss.

SPECIFICATIONS

Type: Air-cooled, single-cylinder, side-exhaust, two-stroke-cycle with crankshaft rotary valve and Schnuerle scavenging.

Bore: 17.8 mm (0.7008 in.)

Stroke: 16.4 mm (0.6457 in.)

Displacement: 4.081 cc (0.2490 cu in.)

Nominal Compression Ratio (full stroke): 10:1

Speed Control: SS-25 - Enya standard air-bleed type carburetor with 5 mm choke; SS-25BB - Enya "G-Type" automatic mixture control carburetor with 5.5 mm choke.

Checked Weights: SS-25—217 grams (7.65 oz) bare; 260 grams (9.17 oz) with Enya M250 muffler; SS-25BB - 237 grams (8.36 oz) bare; 284 grams (10.02 oz) with Enya M251 muffler.

Mounting Dimensions:

Crankcase width: 29.5 mm

Length from prop driver face: 73 mm (SS-25); 72 mm (SS-25BB)

Height above CL (less glow plug): 58.5 mm

Bolt-hole spacing: 37x15 mm

Manufacturer's Claimed Power Output: SS-25 - 0.5-0.65 PS less muffler, 0.4-0.55 PS with muffler; SS-25BB - 0.6-0.75 PS less muffler, 0.5-0.65 PS with muffler.

Manufacturer: Enya Metal Products Co. Ltd., Nerimaku, Tokyo 176, Japan.

U.S. Distributor: Altech Marketing, P.O. Box 286, Fords, NJ 08863.