

Nano Disc Manual



WARNING:

Parts of the engine will be very hot while in operation and will take time to cool down. Make sure children are fully supervised. Ensure burner is extinguished after use. Do not leave engine running unattended. When in use or when the engine is cooling, keep away from flammable materials and fuel.

Because of its high rpm the engine may 'walk' across a table/desk due to vibration. Read the instructions to find out why this happens and how to prevent this.

UNBOXING

The Nano disc engine arrives fully tested and assembled. The engines are supplied in strong tubes. All you need to do is remove the tube cap, remove the engine with the protective bubble wrap. Unroll the bubble wrap from around the engine and remove the packaging from the burner. The burner sits in the hole in the base.

It is now time to run your engine!

THE WICK

Push the wick through the burner. The wick only needs to protrude 4mm from the end. The rest of the wick can remain curled up in the base of the burner.

ADDING FUEL

Fill the burner with methylated spirits (Denatured alcohol). No more than $\frac{3}{4}$ full. Half full will last a long time running the engine. Put the lid of the burner on and place the burner into the base. It will fit snugly.

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STARTING

Light the wick using a cigarette lighter, match or piezo electric starter. The flame may not be obviously visible at first due to the small size. Let the engine warm up. It won't be able to start for 30 seconds to 1 minute. Once it has warmed up, rotate the flywheel. With this engine you can flick the flywheel in either direction and it will run. You may need to flick the flywheel more than once to start the engine.

STOPPING

You can either let the burner run out of fuel or extinguish the flame. It is recommended that the flame is blown out before running out of fuel. This saves the wick from smouldering, which will reduce its length over time. Ensure the flame is out and let the engine cool down before putting away. The engine can still be over 200C even if the flame is out.

VIBRATION ACROSS THE TABLE/DESK

A higher revving engine tends to vibrate more and walk across the desk/table. In testing we concluded that under normal operation the engine wouldn't walk. However we haven't tested on all types of table surfaces, so please keep your attention on the engine when it is running.

MAINTENANCE AND OILING

The Nano Disc engine is a relatively simple design with few parts and not many parts that can wear. We don't think it will need much if any maintenance or oiling. The piston shouldn't need oiling and we suggest keeping it away from oil. The con-rod and bearing may need oiling after excessive use but for most users this will never need doing. If you do need to oil the bearing or con-rod in the future use a sewing machine and only put a small single drop on the bearing and con-rod ends. Never use wd40, motor oil or a general oil. If you are struggling to start the engine check the wick size BEFORE oiling as this is likely to be the cause of the problem.

TUNGSTEN PISTON

If you have chosen the optional tungsten piston, the piston certainly won't need oiling and adding oiling will degrade performance. The tungsten compound is extremely hard wearing and slippery.

LOOKING AFTER YOUR ENGINE

Keep your engine free from dust and grime as this will degrade performance or stop it from running.