



# KME DIAMOND PRO .60

More Power  
WORDS: Ryan Kephart

**K**ME ENGINES, ALTHOUGH NEW TO THE HELICOPTER INDUSTRY, THEY HAVE OVER 19 YEARS OF DEVELOPING AND ENGINE MODIFICATIONS FOR ALL TYPES OF ENGINES. KME has over seven patents in motorcycle and the bicycle industry. Like one of your local RC helicopter pilots, an individual that wanted an engine that can produce more power than standard lead to the development of KME. This business was started with the help of a parent company that manufactures CNC machines. These machines allowed KME to create everything they needed to build and produce a full CNC machined aluminum engine locally without having to outsource. 98 percent of all

KME products are manufactured here

in the United States, which include the Diamond .60 engine, Powerhouse .60 pipe, and the Diamond Pro 110, which will be released shortly. KME is here to stay with plans to have five engines out by the end of next year. Let's take a look at the engine that started it all and see if KME has what it takes to compete.

## FEATURES

The KME Diamond .60 Pro features a completely new engine case design made from billet aluminum. The case is CNC machined in one piece and allows this engine to fit most 50-size nitro helicopters. Every part of the KME Diamond .60 is polished, giving it that extra bling we have always wanted in a nitro engine. KME also designed and built their own carburetor, piston, and sleeve to achieve the close tolerances they were looking for. The carburetor is a simple two-needle adjustable mixture control that allows the high end and the low end to be adjusted. The head of the KME Diamond .60 is also made from aluminum and machined to match

the rest of the engine. Four cooling fins are located on the side of the head and 10 fins are located on the top. This engine also uses standard muffler mounting, which allows you to connect a standard 60 or 90-size muffler.

To match the KME .60, we opted to use the KME Powerhouse .60 Pipe which was specifically designed for the Diamond .60. KME claims that the Diamond .60 provides up to 30% more power than most .50 size engines, but we couldn't just take their word for it. Let's see how the Diamond performed and see if we get the power we have all been looking for.



### + THE GOOD

- Beautiful CNC machined aluminum
- Extra power
- Quality you can see

### - THE BAD

- No printed manual
- Needles are not factory set

### CONNECT

|               |  |
|---------------|--|
| MANUFACTURER: | KME  |
| WEBSITE:      | <a href="http://www.kmeengines.com">www.kmeengines.com</a> |
| PART NUMBER:  | KME1240-60   |
| STREET PRICE: | \$319  |

## INSTALLATION/ TESTING

Installing the KME Diamond .60 is no different than installing a normal 50-size nitro engine. We opted to use the Outrage Velocity 50 as a test bed due to the increased rotor size and extended tail boom. This helicopter already flew well with the Y.S. 56, but we wanted to see how much more power this helicopter could handle by using the Diamond .60. Basically, swapping out was as simple as removing the four motor mount bolts, sliding the old motor out, and sliding in the KME Diamond .60. The Diamond sat perfectly on the engine mount and nothing had to be modified for this engine to work.

The KME Diamond .60 comes almost ready to run, with only a few steps to complete before the initial start. The needle valve must be set for break-in, as they are not set from the factory. When you open the box you'll find that no printed manual is included, but thankfully

an online manual is available that can be downloaded from [www.kmeengines.com](http://www.kmeengines.com).

After installing the engine and setting the needle valves, a break-in process must be completed. I used 30% nitro and added about a half turn on the high needle for break-in. The manual suggests running around a 1900 rpm headspeed until the engine is fully seated. After the break-in process was complete, I started leaning the engine. I noticed that the idle was a little rough, so I also leaned the low end needle until I achieved a stable running engine. I noticed, however, that after a prolonged

period of time at idle the engine would load up and quit.

During the first flight after break-in the engine ran extremely well. The power was definitely there, as the Velocity



soared through the air with no bogging tendencies. Even with the pitch maxed out, the KME Diamond .60 took it with ease. Towards the end of the flight I noticed the engine leaning out a bit and decided to land and adjust the mixture for the last portion of the tank. This allowed me to run a little rich during a full tank, but perfect as it gets to empty. Overall, the engine performed well and I did not experience any abnormal operation. We'll see how well this engine performs in the long run, and we'll post our results in a long-term test sometime in the near future.

## CONCLUSION

If you're looking for some more power (or you simply have a heavier-than-normal helicopter), the KME Diamond .60 might just fit your needs. The engine has great looks and amazing quality inside and out. We ran the engine with about a gallon of fuel and so far we have yet to see any problems. Although KME is a relatively new company, it looks as if

they have done a great job from the beginning. KME has also started to work on a new engine for 90-size helicopters that promises the same great features, coupled with the power of 1.10 engine in a 90-size case. Keep an eye out for a review in the near future as well as the long-term review of the Diamond .60. *[TBI]*



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- Main Rotor Diameter: 305 mm
- Tail Rotor Diameter: 85 mm
- Overall Length: 293 mm
- Brushless Motor: WK-WS-15-001
- BSC: WK-WST-20A-L
- Battery: 7.4V 850mAh Li-Po
- Gyro: three-axis-gyro
- Transmitter: WK-2603
- Receiver: RX-2615V
- All-up Weight: 106g (Battery included)



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