



Vortex Viper HD Binoculars

The Vortex Viper HD has long been a great option for birders looking for a mid-priced binocular that's discernably better than others in the \$300-\$800 price range. With an aesthetically simple design, it feels comfortable and solid, and not too big or heavy. It's got a robust build quality, and the mechanics feel sure and precise. It features waterproof construction, good eye-relief, five-foot close focus, and Vortex's excellent VIP warranty—all for under \$500. It was a quality binocular for the price.

Still, Vortex decided to upgrade the Viper HD model, retaining the core features and elements that have made it such a good birding binocular. What is new and clearly better are the optics: larger prisms

with a higher refractive index. The prisms are the one glass component in binoculars that is designed not to transmit light, but to fully reflect it. The function of the prisms is to take the image presented by the objective lens at the front of the binocular, and correctly invert it and orient it so that when the magnified image exits the ocular lens at the back end of the binocular, the bird you're looking at is right side up and correctly oriented left to right.

The prism upgrade in the new Viper HD produces a sharper image relative to the last generation, but the big story is a field of view that went from 347 to 409 feet at 1,000 yards, placing the Viper as a leader of the pack in this race

that is critical for better birding. The new Viper also has enhanced anti-reflective lens coatings. Its rubber armor is more textured, and the locking diopter has a new look.

Those with a smaller face struggle to find a good binocular with barrels that will squeeze close enough together to accommodate the distance between their eyes (known as your interpupillary distance, or IPD). The Viper HD may be one of the few mid-priced binoculars that will work for such people: The minimum IPD is just 55mm.

Vortex keeps things pretty lightweight with this binocular (just over 24 ounces) by featuring a polycarbonate resin chassis with some aluminum elements, such as the neck strap lugs and the eyecup assemblies. The retractable eyecups are well designed and well built.

The Vortex VIP (Very Important Promise) warranty reads like a free insurance policy that comes with the optics: "We will repair or replace your Vortex product in the event it becomes damaged or defective—at no charge to

you. If we cannot repair your product, we will replace it with a product in perfect working order of equal or better physical condition." The only things this warranty won't cover are "loss, theft, deliberate damage, or cosmetic damage that does not hinder the performance of the product." In a day and age when so many of the things we own have a limited shelf life and/or warranty, it's refreshing to see a company that fully stands behind the products it's putting in your hands.

If you're looking for a higher-quality, mid-priced binocular, the Viper HD from Vortex is worth serious consideration.