

# GRAUPNER HYDROPLANE 3D

**SPECS**

**MODEL:** Hydroplane 3D  
**MANUFACTURER:** Graupner  
**DISTRIBUTOR:** Hobby Lobby Intl.  
**TYPE:** 3D flying boat  
**SMALLEST FLYING AREA:** baseball infield  
**IDEAL FOR:** intermediate pilots  
**WIDTH:** 21.63 in.  
**LENGTH:** 31 in.  
**READY-TO-FLY WEIGHT:** 10 oz.  
**WING LOADING:** 4 oz./sq. ft.  
**FLIGHT DURATION:** 10 min.  
**PRICE:** \$100

**YOU NEED**

- ✦ 4-channel radio with elevon mixing
- ✦ 4 microserves
- ✦ micro-receiver
- ✦ 10 to 15A ESC
- ✦ Graupner Compact 260 8.4 brushless motor or equivalent
- ✦ 8x4.3 SlowFly prop
- ✦ 3S1P 350 to 730mAh Li-poly pack

I have built and flown a flying boat, so I was very interested to see what Graupner had done with the concept. I found its Hydroplane 3D to be a very sophisticated design and a beautiful flyer that handles well. The most important difference between my previous model and the Hydroplane 3D is that Graupner's version is designed to be waterproof, and all of its equipment is entirely enclosed in the model. Once you've assembled it, you're no longer able to access its RC gear. If you are used to flying agile foam aircraft, you will love this model. It isn't difficult to fly and has no vices, but it helps to have some 3D experience. Let's open the box and get busy with UHU or a similar foam-friendly glue.

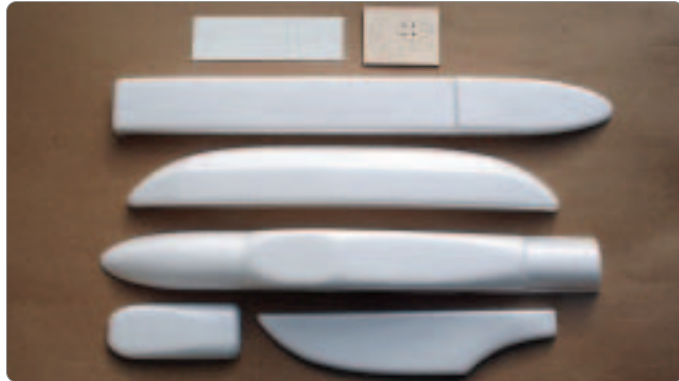
**SCOREBOARD**

- ⊕ An unusual design with excellent performance.  
Watertight construction.
- ⊖ No plans or 3D drawing.  
RC gear isn't accessible after construction.



**FROM SEA  
TO SHORE,  
THIS AEROBAT  
DELIVERS!**

## PILOT REPORT GRAUPNER HYDROPLANE 3D



Above left: precisely molded foam parts make the assembly process easy. Above right: it's important that the RC gear be installed and working properly before you glue the lower hull into place.

### QUALITY STARTS HERE

Although Graupner provides a comprehensive instruction booklet, it didn't include a plan or a small drawing of the model. The Hydroplane 3D is 31 inches long and 21.5 inches wide. An 80W brushless motor and a 3S1P 350mAh Li-poly are recommended, but the model will also accept a 730mAh pack.

All of the Depron parts are crisply cut, and in addition to carbon-fiber strengthening rods and flat strip, a carbon-fiber motor-mount tube, a ply servo-mounting plate and ply motor mount are included. The accessories include special control horns and wire and plastic pushrod tubes. Because the construction is slightly more complex than that of a typical foam model, it is very important to read the instructions before you start.

### GLUE TIME

Most modelers who work with foam regularly will already have UHU POR glue or other foam-friendly glue on hand, and this,

coupled with some epoxy, makes the model very easy to build. As with all foam models, I have very little to say about the building process. If you assemble the parts in the proper sequence, the accuracy of their fit makes the task problem-free; however, a few points are worth mentioning.

The motor mount consists of a projecting carbon-fiber tube with the ply motor mount at the end. The ply mount is designed for an Axi-type motor that is mounted through its backplate with screws inserted from the back. I test-flew the plane with a few motors and got the best performance with an Axi 2208/34. (Hobby Lobby recommends a 2208-26.)

To help waterproof the assembly, make the exit holes for the leads from the motor to the controller as small as possible; I threaded the leads through the fuselage before I fitted the connectors. Likewise, the leads from the controller to the battery have to exit the top of the body; so again, I threaded these through the body and the battery holder before I added the connector.

The battery holder needs a mention; when you assemble the foam box, make sure that your packs will fit inside. Inside the upper and lower pod moldings is a battery box for either a 3S1P 350mAh Li-poly with packing or a 3S1P 730mAh

### FEATURES

The Graupner Hydroplane 3D features Depron sheet and molded parts combined with carbon-fiber strips to achieve an aerodynamic and complex structure. The model features elevons and twin rudders. Graupner includes a set of self-adhesive decals, and special Graupner spray paints are available for use on foam.

without packing. I recommend the 730mAh pack for all outdoor flying and the smaller pack if you want to fly the model indoors. You have to cut a hole in the front of the pod to insert the battery, and again, you must be able to slide the pack through it. A smaller hole at the rear of the pod provides ventilation.

I always use 3M Blendederm tape for hinging. The wire and plastic pushrod tubes have to be installed carefully to ensure smooth operation. It is better to install the servos early, as this makes it easier to line up the control runs. I didn't make the suggested Z-bend at the end of each wire. I like to have a method of adjustment on at least one end of the wire, so I used a 90-degree bend at the control-horn end of the wire and an adjustable connector on the servo-output arms. To secure the bend, I slipped a length of tightly fitting electrical wire sleeve over it and added a dab of CA. I use this combined connecting system on nearly all of my small electric models. I find it very useful to be able to adjust this when setting up elevon or flaperon systems.

When you have made thorough checks to ensure that the RC system is working

**The Axi 2208/34 provides plenty of power for all maneuvers.**

### GEAR USED

#### DRIVE SYSTEM:

Axi 2208/34 brushless motor, Castle Creations Phoenix 10A speed control

#### RADIO SYSTEM:

Futaba 8UP transmitter, Hyperion receiver, Hitec HS-55 servos

#### BATTERY:

ThunderPower 3S1P 480 to 730mAh Li-poly packs

#### PROP:

Graupner SlowFly 8x4.3



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perfectly, you can wave it farewell, and glue the lower hull into place.

I decided to test fly the plane before I used Graupner spray paints to decorate it. Before takeoff, I weighed my Hydroplane 3D—8.6 ounces without the battery. With a ThunderPower 480 pack, the flying weight was 10 ounces, and with a Hyperion 730 pack, it was 11 ounces.

### FIRST FLIGHTS

Ground takeoffs are easy, whether from grass or a hard surface. For the first flight, I used a ThunderPower 480 pack to minimize weight. The nice part of this flying boat design is that it has a central hull that runs the entire length of the model. This provides a perfect handhold for launching. Launching the Hydroplane into a light wind resulted in a very rapid climb, and I needed to trim the model a little to steady it down. After I achieved straight and level flight, I was able to enjoy handling the model; it proved to be remarkably agile and delightful to fly. It was quite light on the controls; it glided well. I was able to fly it as if it was a 3D foam model.

Although I was delighted with its handling characteristics, it was soon obvious

### TIP



The foam structure is light and designed to allow the Hydroplane 3D to do 3D maneuvers. Hand-launching is easy when you

hold the hull, but be very careful not to squeeze the hollow foam too hard or you may damage it.

that I was operating at less than full power. Though the 480 pack is the lightest option, the operating voltage can quickly drop to a low level, so I landed to replace the pack with the larger 730 size. The larger pack provided extra power that easily offset the slight weight increase. Now able to explore the Hydroplane's potential, I was thrilled with its performance. I had just enough power to hover, and I enjoyed doing precise stunts and inverted flight.

This model definitely turns heads! At first glance, no one thinks it will fly; then, when it's in the air, they think that it won't fly well. Then they shake their heads in disbelief. It's quite amazing! ☺

See the Source Guide on page 96 for manufacturers' contact information.



>> THIS IS THE TYPE OF MODEL THAT'S FANTASIC FOR SPOT LANDINGS

### IN THE AIR

Any model with "3D" in its name must be treated with respect, and the Hydroplane 3D is no exception. The model is best suited to pilots who have 3D foam model experience.

**CLIMB PERFORMANCE** I recommend that you thoroughly familiarize yourself with the model before you fly it off water. The model is easy to hand-launch if you hold its underside. After you let it go, the Hydroplane 3D will do anything you like—no need to throw it at all. If you want to go vertical, just do it!

**FLIGHT STABILITY** In spite of its unconventional design, the Hydroplane 3D is amazingly stable and can be flown very slowly at high-alpha angles. It copes well with relatively strong winds and has a surprisingly flat glide. This is the type of model that's fantastic for spot landings, as it can be flown close to the ground very slowly with the nose up. A heavy, "greased-in" landing might damage it, but stalling it just above the ground won't. I found the Hydroplane difficult to hover consistently, though.

**PILOT RECOMMENDATIONS** Approach flying off and over water with caution; only do so once you are confident of the model's performance. I recommend that you hand-launch it first and land on water before you attempt water takeoffs. The model tracks well but can be difficult to turn into wind if the wind is strong. Graupner supplies extra twin fixed rudders that would be beneficial if you fly off water regularly. Takeoffs from water are easier in a moderate wind and small waves, and once the model has picked up speed, it's best to use a quick elevator input to make it jump off the water. Landing as if you were making a ground landing is safer if you drop the model onto the water; this reduces the risk of a nose-over.

**PERFORMANCE HIGHLIGHT** This model loops easily during level flight and has a very fast roll rate. It spins extremely well; it is even able to do very flat inverted spins. Inverted flight is easy to maintain, and if you're used to 3D foam models, you will find many similarities. If you really want to throw it around, fast thumbs are the name of the game, but with its ultralight structure, it is not very crash-resistant and won't bounce like your other 3D foam models.