# Formula 350 Crossover Bowrider (2017-) Brief Summary

The Formula 350 Crossover Bowrider OB capitalizes on two strong trends in boating today: the move from sterndrive power to outboard power, and the added utility of creating cuddy accommodations in an otherwise bowrider boat. Since the 350 Crossover Bowrider helped to start the trend to accommodations in a traditional bowrider, it is fitting that it should help lead the way with outboard power in class, as well.

## **Price**

### **Base Price**

Prices, features, designs, and equipment are subject to change. Please see your local dealer or visit the builder's website for the latest information available on this boat model.

## **Test Results**

RPM	MPH	Knots	GPH	MPG	NMPG	STAT. MILE	NM	dBa
600	4.6	4	2.2	2.1	1.8	423	367.7	66
1000	6.6	5.7	3.8	1.8	1.5	352	305.8	69
1500	8.5	7.3	6.2	1.4	1.2	275	238.7	71
2000	9.8	8.5	9.9	1	0.9	198	172	75
2500	14.5	12.6	14.4	1	0.9	201	174.9	77
3000	21.8	18.9	19.2	1.1	1	226	196.8	79
3500	28.3	24.6	23.4	1.2	1	241	209.7	80
4000	36.4	31.6	30.2	1.2	1	240	209.1	79
4500	41.8	36.3	38.5	1.1	0.9	217	188.9	80

RPM	MPH	Knots	GPH	MPG	NMPG	STAT. MILE	NM	dBa
5000	47	40.9	47.3	1	0.9	199	172.6	78
5500	51.2	44.5	62.5	0.8	0.7	164	142.4	80
6000	56.6	49.2	90.7	0.6	0.5	125	108.4	80
6250	58.2	50.6	93.3	0.6	0.5	125	108.4	80

View the test results in metric units

Formula\_350@BRk\_chart\_2017.jpg

# **Specifications**

Length Overall	35' 0" / 10.67 m
BEAM	10' 9"   3.28 m
Dry Weight	13,850 lbs.   6,282 kg
Tested Weight	15,492 lbs.   7,027 kg
Draft	39"   .99 m
Draft Up	
Draft Down	
Air Draft	
Deadrise/Transom	21 deg.
Max Headroom	6' 2"   1.88 m

Bridge Clearance	6' 10"   2.08 m
Weight Capacity	21,110 lbs.   9,575 kg
Person Capacity	N/A
Fuel Capacity	222 gal.   840 L
Water Capacity	29 gal.   110 L
Length on Trailer	
Height on Trailer	
Trailer Weight	
Total Weight	15,492 lbs.   7,027 kg
Aft Deck	
Salon Inside Width	
Salon Fore & Aft	
Salon Height	
Salon Volume	
Galley Volume	
Master SR Width	
Master SR fore & Aft	

Master SR Overhead	
Master SR Volume	
Eng. Room Volume	

# **Acceleration Times & Conditions**

Time to Plane	5.4 sec.
0 to 20	
Ratio	1.75:1
Props	4 @ 14 1/2"D x 19"P
Load	3 persons, 1/2 load, 2/5 water, 50 lbs. of gear
Climate	96 deg.; wind: 14 mph; seas: 3'

# **Contents of Report**

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Formula 650 @BR @B running shot

In addition to the sheer size of the Formula 350 Crossover Bowrider is the creative cabin below the bridge deck. She combines the overnight accommodations of a pocket cruiser, a huge seating area forward like a mega-deckboat, and an express cruiser bridge deck.

## **Mission Statement**

The mission of the Formula 350 Crossover Bowrider is to provide her owner with a versatile boat that can be used for entertaining, sunning and beach outings, plenty of speed to cover long distances fast, and an overnighting capability for weekend cruising. By being powered by triple outboards instead of conventional sterndrives, Formula is offering the ease of maintenance that consumers want.

#### Formula 650 6 BR OB outboards

Our test boat was powered by three Mercury Racing 350-hp engines attached to Armstrong brackets. Note that all rigging emerges from the brackets and there is no conventional outboard well.

# **Distinguishing Features**

- A Large, Versatile Bowrider The bow seating was designed for riding, sunning, and entertaining and is huge and innovative.
- Offset Access to the Bow A passageway to the bow on the port-hand side, a departure from most bowriders.
- Cabin to Accommodate a Couple on Overnights With a double bed below, mini galley, stand-up wet head, and storage, this bowrider is also a functioning cuddy or pocket cruiser.
- **Copious Storage** By putting the engines outside the boat, the 350 Crossover Bowrider has opened up a large area in the stern for all sorts of storage and added equipment.
- Formula Painted Exterior Formula remains the only builder in class that paints its hulls which is why they always look like the shiniest boats in the marina.
- **Highest Quality in Class** Formula is at the pinnacle of quality in class in virtually all areas of boat construction.

## **Performance**

The Formula 350 Crossover Bowrider has a length overall of 35' (10.7 m), a beam of 10'9" (3.3 m), and a draft of 39" (99 cm). With an empty weight of 13,850 lbs. (6,282 kg), 52% fuel (116 gal. / 439 L), 12 gallons (45 L) of water aboard, 3 people onboard and test gear, we had an estimated test weight of 15,492 lbs. (7,027 kg).

We tested on a day with an ambient temperature of 96-degrees F, which is far from optimal for the engines' best performance.

**Top Speed.** With triple Mercury Racing 350-hp engines driving SS 4-blade 14-1/2" x 19" props, we reached a top speed at 6250 RPM of 58.2 mph.

**Best cruise** came in at 3500 rpm and 28.3 mph. That produced a fuel burn of 23.4 gph which the 350 could maintain for 8 hours and 30 minutes and 241 statute miles, with a 10% reserve.

Formula 650 6BR kOB running

We tested the boat in flat water in the ICW. Her crystal blue metallic cool color is painted on, something that only Formula does in class.

# Handling

As is typical with every Formula boat we've tested, the 350 Crossover Bowrider has the same characteristic nimble sportboat handling that we've come to expect. She was responsive to the helm and had no problem handling any maneuvers that we put her through. She handles every bit as well as her near sister does with sterndrives.

**Offshore.** With 3' to 4' seas offshore during our sea trials, she tracked perfectly in head, beam and following seas. She had a solid, comfortable feel at all reasonable speeds, thanks to her 21-degree deadrise at the transom. We heard no creaking or squeaking of interior bulkheads or cabinetry at speed as we crashed through waves.

We ran the inlet several times and were amazed that not a drop of water got on the windshield. We have tried in previous tests of the 350 Crossover Bowrider sterndrive versions and were never able to get water on the windshield. This is a dry boat with outboards or sterndrives.

She went from a standing stop to planing in 5.4 seconds, to 20 mph in 6.6 seconds and to 30 mph in 9.0 seconds.

Formula 650 6BR 6B running

Running a notorious inlet we slammed the 350 Crossover Bowrider into seas and her hull threw the water aside as can be seen in this photo. Not a drop got on the windshield or inside the boat.

The 350's deep-V hull and sharp entry was refined years ago in offshore racing and has changed little over the years. Note how the running strakes and hard chine throws the water aside.

#### Formula 650 6BR 6B running

Coming off of waves and slamming down did not bother either the boat or crew. The former because of her stout construction, and ladder because of the boats 21-degree deadrise at the transom.

Our captain reports that she tracked "straight and true" in head, beam and following seas.

# **Comparison with Sterndrive Power**

We have made two tests of the Formula 350 Crossover Bowrider with sterndrive engines, one powered by twin MerCruiser 430-hp 8.2 L H.O. sterndrives with Bravo III props, and one powered by twin 430-hp Ilmor 6.2 L engines driving through Ilmor's One Drive with dual props. These two boats had a top speed of 56.6 mph and 56.0, respectively, in our tests.

So, the 860-hp sterndrive-powered boats were not quite as fast as the 1200-hp outboard-powered 350 Crossover Bowrider by about 2 mph. But there was a big difference between the 350 Crossover Bowrider sterndrives compared to the OB version -- the outboard-powered boat was about 6,000 lbs. (40%) heavier!

**Not Apples-to-Apples.** Boats this size are remarkably weight sensitive. While tests such as these are never apples-to-apples, it is clear that the 350 Crossover Bowrider with triple outboards has a lot more grit than her sterndrive near sisters.

### Formula 650 6 BR k OB running

Even though she's a relatively large boat, the 350 Crossover Bowrider handled like a small sportboat. Generally, all boats get heavier as they get older because customers want more and more amenities on the boats and the builders oblige. For example, our outboard boat had a hardtop which was not only heavy, but also presented more windage than the sterndrive half-sisters we tested.

**Other things might change, too.** For example, Formula has increased the size of the fuel tank to 222 gallons (840 L) from 172 gallons (651 L). All that empty space in the stern can be filled with more amenities, such as a 5 kW Kohler generator. Plus, the beefy Armstrong bracket is not light. It all adds up. In light of all of this extra weight, the 2 mph improvement with the extra 340 horses does not seem inconsequential.

#### Formula 650 @BRk@B engines

Ilmor 430-hp 6.2 L sterndrives were the most fuel efficient in our comparison based on our tests, but were not the fastest rig.

**Best Cruise Comparison.** The 6.2L Ilmor rig was slightly more fuel efficient at best cruise compared to the MerCruiser 8.2 L H.O. power. It burned 19.6 gph getting 1.3 mpg at 30.8 mph at 3500 rpm compared to the

MerCruisers' 24.3 gph getting 1.2 mpg going 29.4 mph at 3000 rpm.

The triple Mercury outboards burned 23.4 gph at best cruise, getting 1.2 mpg going 28.3 mph at 3500 rpm. On a miles per gallon basis, all three models were remarkably close. For this reason, engine selection, and type of power will likely be based on other factors for most buyers.

**Noisy? – Not!** Traditionally, one of the objections to outboard power is that they are noisy compared to sterndrives or inboards.

Our test data indicates that the triple Mercury Racing 350s were actually quieter than both of the sterndrive 350s that we have tested.

# **Features Walkthrough**

Formula 650 @BRk@B outboard engines

All outboard engine rigging comes through the transom into the Armstrong brackets and stays off the deck. The arrows at left point to the emergency re-boarding ladder at bottom which can be deployed by a person in the water, as required by ABYC standards. The arrow above points to the bracket to which the watersports re-boarding ladder is attached. A handy detail on the sterndrive version is a stainless steel rail along the aft edge of the stern platform where swimmers can hang on. We'd like to see small versions of that port and starboard on the platform sides.

Formula 650 6BR 6B swim platform

The swim platform measures 2'6" (.77 m) fore and aft. Watersports can be launched from the ends of the 9' (2.77 m) swim platform.

### Stern

This is where the 350 Crossover Bowrider differs from the sterndrive version. With three big outboards hanging on the Armstrong brackets nestled under the swim platform, important real estate is occupied. For most people, this is the biggest negative of the outboard option. Formula has done its best to ameliorate the situation with its existing tooling by making the swim platform 2'6" (0.76 m) fore and aft and 9" (0.23 m) wide. This deck is kept clear of hoses and other outboard rigging, thanks to the Armstrong brackets and the fact that all outboard rigging is run through three large openings in the transom under the swim platform.

Formula 650 6BR OB three outboards

The three outboard engines could be tilted completely out of the water – an important feature that no sterndrive boat can claim.

Nevertheless, the only entry points off the stern platform are at the ends, port and starboard. There is no integral boarding ladder as we might find on a sterndrive version, except for an emergency, slide out ladder that is an ABYC safety requirement. The boat's main swim ladder is stowed in what would otherwise be the engine compartment.

Formula 650 @BRk@B aft sunpad

Under the aft sun pad is storage space ideal for fenders, dock lines, and deflated water toys.

### Aft Sun Pad

The aft sun pad measures 74" x 44" (1.88 m x 1.12 m) which is almost the size of a double bed and offers plenty of space for two or three people to sun and lounge. The backrest for the settee in the cockpit is articulated and serves triple duty as a backrest for the cockpit, chaise rest for the sun pad, or sun pad extension.

Formula 650 @BRk@B sun pad

The 350 Crossover Bowrider's aft sun pad is large and will be one of the most popular spots on the boat.

The cockpit seating's aft back rests have three positions so they can serve triple duty -- forward facing seated back rest, and two chaise lounge positions facing aft.

### **Stern Amenities**

It is hard to think of any amenities that have been left off the stern of the 350 Crossover Bowrider. To port is a stereo remote that can be reached from the water, as well as a shower wand with hot and cold fresh water to port next to the transom entrance gate. Here, too, is the freshwater engine flush -- one fitting handles water to all three engines.

Formula 350 @BRk@B accessories

From left to right: stereo remote, shower wand, and freshwater flush nozzle for the outboards.

To starboard in the side bulwarks are two shore power receptacles and a freshwater intake. On the transom is an LED light which comes on when the engine is running and blinks clockwise when the engine is in gear -- a nice safety feature which we'd like to see on all boats of this type.

Formula 350 @BRkOB led light

The LED light fixture on the transom is lit when the engine is on, and then rotate when the engines are in gear to signal that people are in the water.

## **Cockpit**

The cockpit is fabricated from a continuous molded fiberglass liner and features Formula's contoured seating with additional supports in the lumbar area as well as behind the knees. No less than 24 drink holders are scattered throughout the bow and cockpit and storage is under most seats and in the deck.

Formula 350 @BRk@B table mount

The cockpit with in-deck mount for the table.

Formula 650 6BR kOB storage

Storage is everywhere in the cockpit of the 350 Crossover Bowrider, including under the carpet in a bin. Formula 650 @BRk@B cockpit table stowage

The large cockpit table stows in a dedicated slot under the starboard cockpit seat.

**Under the aft seat** is a cavernous storage locker where the engines are located in the sterndrive version. In our test boat part of the space was used for a 5 kW Kohler, Low-CO gasoline generator. The hatch lid was well insulated for sound deadening. Located on the lid is the ss boarding ladder. Batteries and pumps can also be accessed here, but most of the area was empty and would be an ideal place to stow water toys.

A large table in fits into a deck mount. This table along with one in the bow, permit two groups of guests to have lunch or have cocktails at the same time. As such, it becomes an ideal day boat for picnics. Filler cushions create yet another sunning area when the table is lowered and used as a foundation.

**Wet Bar.** To port is a molded cockpit wet bar with an integrated sink, Corian countertop, trash receptacle, and a 17.5 quart (16.6 L) carry-on cooler. A dual-voltage cockpit refrigerator is also standard. To starboard is J-shaped seating around the table.

Formula 650 @BRk@B wet bar

We like the new two-tone treatment of the wet bar entertainment console on the port side of the cockpit. Shown here is the sink, trash basket, and six drink holders. The countertop is held up by gas struts and it is made of Corian.

Formula 650 @BRk@B refrigerator

Under the counter is storage and the battery switch and the refrigerator.

Formula 650 6BR 6B hard top

Our test boat was equipped with the optional fiberglass hardtop. Depending on the mission of the boat, it can be fitted with a towing pylon for wakeboarding, or a radar and VHF antenna. The 350 Crossover Bowrider could easily be taken to the Bahamas or offshore islands in decent weather.

The optional SureShade awning measures 6'6" by 6'6".

### Helm

To the port side of the helm is a double wide lounge allowing one person to face forward or aft in chaise lounge fashion, or two people to relax and have a conversation with the captain and "admiral" at the helm.

The helm, itself, features double-wide seating, each with its own bolster, allowing a second set of eyes to be facing forward. The steering wheel is wrapped and is the sport model. The dash fiberglass is dark and an upholstered dash eyebrow is a similar color reducing glare in the windshield.

Formula 350 BRKOB trim tabs

The outboards control binnacle, standard Bennet hydraulic trim tabs, and Mercury joystick for the three outboards. Mercury Digital throttle and shift is standard.

Formula 650 6BR 6B helm dash

Here we see the dash with the Raymarine nav screen front and center. The Mercury engine monitoring screen is at right with digital readouts. Analog gauges are at left -- take your pick. Our captain's hand is on the Mercury Active Trim control which automatically trims the boat at any speed.

Formula 650 @BRk@B helm dash

Our test captain tested visibility both sitting in the seat and leaning on the bolster. He reports that while sitting he had good visibility over the dash and under the stainless steel windshield header, and could easily see over the windshield when leaning.

Formula 350 @BR OB helm panel

Formula has equipped the instrument panel with a red horn button – one of the few times we have ever seen this done in class

Formula 650 @BRk@B fiberglass

The dark colored fiberglass and upholstery reduces glare off the windshield.

Formula 650 @BRk@B lounge

The lounger to port adjacent to the helm offers clear sightlines to the water ahead. The seatback forward opens to reveal a huge storage compartment with hooks for hanging lines.

Formula 650 @BRk@B storage bin

The storage bin is large forward of the bench seat/lounger. This lid is well padded and makes a comfortable backrest when facing aft -- an ideal place for a spotter when towing.

Formula 650 @BRk@B cockpit seat

There is a standard electrical lift which raises the cockpit seat to access what is the engine room in the sterndrive version – put huge storage in the OB model we tested.

### Formula 650 6BR 6B storage

Our captain is standing in the large storage compartment, formerly the engine room. Note the re-boarding ladder living at the right attached to the lid.

Formula 650 6BRkOB bilge pump

A bilge pump and sea strainer are easily accessed in the floor. The optional Kohler 5 kW generator is mounted on a raised box.

Formula 350 @BRkOB batteries

Three AGM starting batteries can be seen here. To port there are two AGM house batteries. There are three large cutouts in the transom through which the outboard engine rigging is run into the metal Armstrong brackets, which can be seen in the background. The edges of the transom cutouts have been gel coated to protect the wood sandwich transom core from moisture.

## Walkthrough to the Bow

The walkthrough to the bow measures 22" (.56 m) across, which is wide, as these passages go. As if there wasn't enough storage already on this boat, the port console allows for a cavernous compartment, ideal for cushion storage and life vests. There are two doors accessing this compartment and inside is an opening portlight. Its sheer size, along with the portlight, had us questioning whether this was actually intended to be another berth. But it is not, and the portlight provides some external visual symmetry as the portlight on the starboard side is in the cabin and is used.

Formula 4350 GBR kOB air dam

Naturally there is an air dam that works in conjunction with the walkthrough windshield to block off the wind on chilly mornings.

### Bow

The bow is accessed from an offset windshield walkthrough and the deck is on the same level from the stern to the bow. A forward facing double wide lounge seat is immediately to starboard, and a pair of dual height tables will turn the bow into an ideal al fresco dining area. With the tables lowered, filler cushions turn the entire bow into a third sun lounge. The starboard seating features an armrest that flips up when not in use and a removable cooler will save having to travel back to the cockpit for a drink or snack.

Formula 350 @BRKOB bow

The bow area is huge and it's easy to see how comfortable a gathering around a pedestal table would be at mealtime.

Formula 650 @BRk@B tables

There are actually two trapezoid-shaped tables for the bow, allowing the owner to put just one in place if that is all the occasion requires. Both tables have dedicated storage slots under the port seating.

The seating area is huge, measuring 7'8" (2.33 m) towards the stern and 4'5" (1.35 m) at the bow. The port seat has dedicated storage for the pedestal table. The forward seat conceals a carry-on cooler and trash receptacle. To starboard is another storage compartment and a removable seat allowing for a two-across forward facing bench seat in front of the helm console.

Formula 650 @BRKOB filler cushion

With the starboard filler cushion removed, the seating converts from a lounger to a two-across bench seat.

When underway this is probably the most exciting seat aboard.

Formula 650 @BRk@B table storage

Dedicated storage for the tables is under the port seat.

Formula 650 @BRK@B cushion

Note how wide the aft facing seat cushion is.

Formula 4350 10BR kOB cooler

Under it is a carry-on Igloo cooler and a trash basket.

Formula 650 @BRk@B seat storage

To starboard under the seat is more stroage which wraps around to the bow. Note that all seats are hinged to the fiberglass base structure with double, articulated ss piano hinges.

Fragmudau350 (CBRkOR) bow filler

A back rest is part of the filler cushion package which allows four people to face forward in lounging style. Formula 650 @BR @B fore deck

The fore deck of the Formula 350 Crossover Bowrider is clear and clean making it usable as a diving platfrom.

Formula 350 @BRk@B anchor

The anchor is launched through the stem which keeps the deck clean and looks cool. The electric Maxwell windlass, anchor and chain are all optional.

Formula 650 @BRk@B upholstery

Many different upholstery colors and color combinations are available. All upholstery is Prefixx with foam backing.

### **Cabin**

The cabin is accessed from a centerline entryway next to the helm. Three solid floating steps lead to a woodgrain finish deck and a full 5'10" (1.8 m) of headroom. The cabin will be finished in high-gloss Bourbon Cherry or Ash with Cherry, Baltic Birch or Wenge woodgrain finish throughout.

Formula 650 @BRk@B cuddy door

The companionway to the cuddy is to the left of the helm.

Formula 650 @BRk@B galley

Below, the mini galley has a sink, running hot and cold water, a refrigerator and a microwave oven.

To port are three soft-close dovetail drawers and a large storage cabinet. The food-prep counter is Corian.

Decking is woodgrain synthetic which is easy to keep clean and durable.

Formula 650 @BRk@B microwave

The microwave is located above the Corian counter and sink.

Formula 650 @BRk@B cabin

The cabin has full standing headroom and there is 5'10" (1.79 m) of headroom in the wet head.

The molded head compartment has a Corian counter and backsplash. Note the shower wand at left. The VacuFlush toilet is standard and has a 37 gallon (140 L) holding tank and dockside pump-out.

We'd like to see the toilet paper rack in the compartment to keep it dry when the shower is used. Formula 650 @BRk@B bed

Here we see the double bed under the bridge deck behind the companionway steps.

Our test boat was equipped with an entertainment system that included a HD TV and DVD Bluetooth system. All upholstery below is Ultraleather.

**The cabin** is designed to primarily accommodate two people. It is an ideal place to place children for their afternoon nap, to say nothing of adults. Our test boat was equipped with an optional 8,000 BTU reverse-cycle A/C system.

To starboard is a love seat upholstered in Ultraleather. Directly across is a chest of drawers, storage cabinets, and an HD TV/DVD combo. Directly ahead of the stairs is a centerline mounted mini galley with microwave, concealed sink and pullout stainless steel refrigerator.

#### Formula 350 BRKOB salon

To starboard is seating with storage just above. The galley is forward. All of the drawers are hardwood with dovetailed joinery.

To starboard is a private head with a molded vanity, Corian countertop, sink, shower, and standard VacuFlush head. Thanks to the unique use of space, the aft end of the cabin is taken up by a full-size double berth with memory foam mattress.

### Formula 650 @BRk@B layout

The cabin design features a dedicated berth. The mini-galley features all the necessary components for an overnight outing.

Several options are offered for cabin amenities including an 8,000 BTU reverse-cycle air conditioner with digital climate control... which will be connected to either the standard shore power, or the optional 5.0 kW gas generator. For boaters on larger lakes a gray water holding system is offered.

#### Formula 650 6BRkOB paint

The paint gets buffed to perfection for an unbelievable shine. Note the through the stem anchor.

## The Price

Visit here for up-to-date pricing.

# **Observations**

The Formula 350 Crossover Bowrider is — for many people — the best of several worlds. She has outboard power for easy maintenance, has two large entertaining venues for say boating with friends, can be used for watersports and towing, has three large sunning locations, and can overnight a couple.

All of this provides a lot of utility, and for many people this is all the boat they need. We should add that because of the boat's 21-degree deadrise and the transom and offshore racing-proven hull, she can be taken offshore in decent conditions to places such as the Bahamas, Nantucket and down the Florida Keys with confidence.