Building A Dumas Chris Craft Boat RC Model

1938 16' Painted Racer

24" long x 8" wide

This is my 1st Model Boat build. Have ~29 airplane models I made that are hanging from my Man Cave ceiling, most 1/32 scale. The largest wingspan is 38.6 inches! (*See at end of this Doc.*) Also have >50 purchased car models, mostly metal on Man Cave wall shelves.

This was a great first model to build. This 24" long RC Model is easier to build than Dumas Mahogany finish versions. Some of those are double planked, 40" long and require more careful build skill. Their product is excellent as are the very detailed instructions with separate booklet of build sketches.

This Doc PDF will provide what I used and added in the way of glues, clamps, etc. As well as what I have done with ~60 similar format: Pics/Long Descriptive Captions, r.e. "How To Corvette Mods and Info," where I had trouble, messed up and how I worked around!

It includes a few things not covered in the excellent, very detailed instructions that are your option. After a short Overview, I'll start with details of where I made Errors or Deviated from their excellent plans. A Detailed Picture Build Follows.

Background, r.e. Model Boats:

Friend and colleague in the Welding Supply business, Tom, Pic right in his Maserati Birdcage. One of 40 vintage cars he owned. Many old race cars he drove at Vintage Car Races each year. Tom was born the same year as myself and died unexpectedly in 2010. I started my Model Car Collection in earnest at that time. Now have >50 mostly 1/18 scale CMC metal models on shelves in my Man Cave.

Tom also had ~40 Vintage boats, many old Race boats. One was 29' long, 1924 Great Lakes Race Boat, "Babby Bootlegger." It was powered by a WWI Spanish aluminum airplane engine.

After seeing most of his full-size restored boats and *many high quality boat models* at his Celebration of Life, I bought a 34" long "Baby Bootlegger" model. You'll see often on the Cris Craft build as in on the chest of draws in my Man Cave, where I built the Chris Craft model.

Have nothing but praise for the Dumas Kit. Arrives well packaged. As suggested, I separated the wood parts and rubber banded like pieces together.

In addition to die and Laser cut wood, all needed hardware etc the two booklets of instructions are great.
The instructions are 44 pages and very detailed. But most impressive is the companion booklet that is 20 pages with Figures, most sketches, referenced by number in the instructions. They SHOW what the words often cannot fully convey. YOU MUST USE BOTH. Errors occurred when I didn't!

The 44 Page instruction booklet is great. Very detailed. Build steps numbered 1 thru 277.
There is also a full-scale detailed print, side and top I referenced often.

And many steps are matched with Sketches on a separate 20-page foldout booklet. Each numbered build step is referenced to a numbered sketch where needed. Only minor trouble I got into was when I did not check the sketch carefully (or occasionally, not at all!)

Starting with Errors and Deviations From Plan

One deviation was the rear seat assembly. The instructions show attaching the seat back to bottom using 1/16" copper wire bent as they show. However, that left too larger a gap between back and bottom. Also, no way to attached except glue to the rear hatch.
Bought small ¼" diameter thin rare earth magnets. Glued in seat back using a 3/8-inch Forstner drill bit. Then used a ¼ inch Forstner drill to insert magnets in the front end of the rear hatch. Works great

Did the same with the front seat. Added magnets to Forstner bit recess in back of seat and in the cross member behind.

Ordered on Amazon 6mm X 2mm. 100 Rare earth Magnets for $10

	Also used the magnets to keep the front and rear hatch secured when the boat is moving and bouncing on the water. Used wood to shim the back of the hatches on the sides and glued magnets to the shims. Attached with medium thickness Instant Glue.
	Made triangular 1/8" thick wood brackets and glued to the top sides of the Hull. Plenty of excess wood in Kit. Held in place with clamps while glue dried. Then to account for height discrepancies attached those magnets with thick JB Weld. That allowed the magnets, separated by wax paper so no glue attached to both, to press into the JB Weld. That made up for any excess gap.
	One "trick" found in another assembly video was installing the Upper Rub Rail. Rather than try to meet at the Blow, extended the 1st side a ½ to 1" extra. When that Instant glue dried, bent the extended end around the bow. It bends easy. As done when attaching to the sides, held in place a minute using wax paper. Then put the pieces on the other side. Cut all ends at an angle then the mating piece the opposite angle. Seeing all the cautions about problems painting the Rub Rail silver, or using sliver tape, just kept white as supplied! Matched the paint scheme perfectly!
	Followed instructions and made cardboard templates for the windshield. When fit was perfect used a glue, I found useful in several places, Gorilla Clear Grip. It works on Plastic. Like contact cement, apply to both sides and wait a few minutes before attaching, Does take time to fully cure.

Tried the method in the instructions to make the edging for the front cockpit. Made the fixture as described. Put the slit for an X-Acto blade offset as suggested (*frankly not sure why it was offset!)*
Then instead of a single X-Acto blade I used a safety razor blade. Instead of glue I used a clamp to hold it in place. Looked like it was working so pulled the whole soft very heavy wall Neoprene tubing thru.
Safety razor blade had slipped down and cut the bottom as well. It was in two pieces! Oops!

The only similar diameter tubing I had was thin wall shrink tubing. I cut a slit on one side with sharp, small scissors. That is what I should have used with the Neoprene tubbing!
Only issue, it buckled around the corners. So cut 3 straight pieces and glued them in place on sides and front. Then cut two small corner pieces at a miter angle so they fit in the corners. Looks OK.

The Build: Following Instructions

Need to build on a board. Mine was 30" X 14". Could have been smaller. I followed the recommendation and stappled the two deck pieces to the board. Also used 5 Minute Epoxy to join the three joints.
Used weights to also hold in place. (*There is that model of my friends "Baby Bootlegger!"*)
Employed a trick I use when making my Write Brothers wood plan model. Put Vaseline under the joints where I used 5 Minute Epoxy!

The parts are well made and need little sanding at this stage of installing the internal rib structure. I used their recommended medium thickness Instant Glue. Bought thin glue as well BUT seldom used.

Need lots of clamps. Bought these from Amazon. 30 pieces, 3.5" for $13.

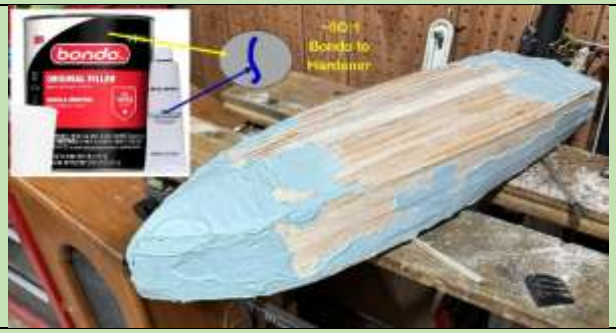
Bought 12 of these 4" bar clamps from Amazon for $20. Had all in use at one point!
Also used wood clothespins and Black Binder Clips in places.

This was an interesting way I found to do Balsa wood "planking." Used the 4" bar claps in the rear, and the Medium Thick Viscosity Instant Adhesive, CYAFIXED brand I bought from Amazon.
Note, I wondered if I needed the two 2 oz bottles I bought initially for $16. Wound up buying a 3rd 2 oz bottle!
Great stuff!

As the front hull curved, I found using clamps to weigh the plank and at times a weight (note the *"shift knob paper weights*" I have on my desk worked great!

I elected to use the suggested optional horizontal placement of the planks at the bottom bow, rather than longitudinal. Worked fine.
Bondo will take care of making the shape smooth, after sanding.

Used my Dremel Tool with steel saw blade to rough trim the horizontal and longitudinal planks.	
	Applied the first side plank from Basswood tight to bottom. The remaining side planks are Balsa.
Used bar clamps to secure while glue set	

	Used tape, a wall and 10 lb weight to maintain pressure on side planks at bow as the glue cured.
Time for some Bondo. Particularly for the bottom bow. Areas on the side and stern needed Bondo as well. Bought the "original' Bondo from Amazon: $16 for 1 ½ lb with hardener.	
	Top Balsa Wood Planks were next. Used clamps to hold in place while glue cured.
Rear Hatch Planked. Coated inside as suggested with Epoxy, diluted 15% with denatured Alcohol. I bought Bob Smith slow cure on Amazon 9 oz for $21.	
	Engine Hatch Planked

Used DAP Plastic Wood filler in the few open gaps. Also used Red Body Putty to fill small depressions. Ready to fiberglass hull. **You're fiberglassing for strength as well as waterproofing.**	
	Used one weight Fiberglass Cloth. Plain Weave High Density Mesh Roving 1.5 oz; 0.05mm ~= 0.003 inches thick, way more than needed on Amazon for ~$10. **Used Bob Smith Industries Epoxy thinned 15% with alcohol.** **Did bottom 1st** **Taped fiberglass to transom and with 1" throwaway brush,** **Brushed slowly from stern to bow.**
Did each side next.	

	Trimmed cured fiberglass with 60 grit sanding sponge. Easy. **Did cut the cockpit openings front and rear with single blade safety razor blade. Then used sandling sponge.**
After 100 grit, finished with 150 wet grit	

	Made a fixture seen in a video to hold the boat vertical as I put a coat of Epoxy on the whole exterior. For this final coat only mixed with 10% alcohol.
Brushed Red Body Putty on the outside to handle imperfections. **Bought US Chemical Red Glassing Body Putty, 1 lb tube for $12.**	

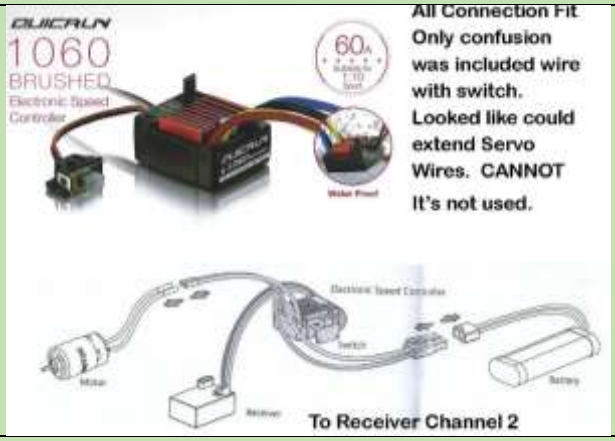
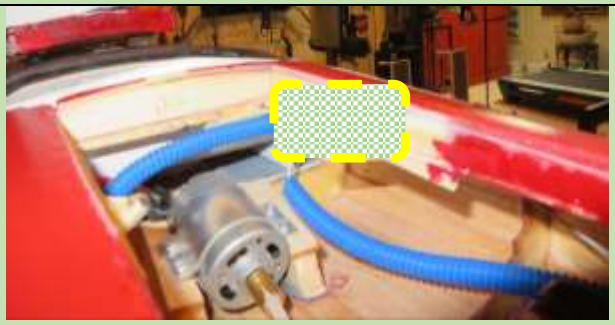
	Wet sanded with 150 grit. Most of the putty came off, only material in depressions left.
I decided it was easier to mount the motor on the motor supports BEFORE I used 5 Minute Epoxy to join them to the hull. Worked but could have done it as suggested mounting the motor block supports 1st. Just harder to assure alignment when drilling the holes for the 4 screws.	
	Drilled the two 7/32-inch holes and cut the bottom slot for the "Stuffing Box" as instructed. Drilled holes and used a saw and file.

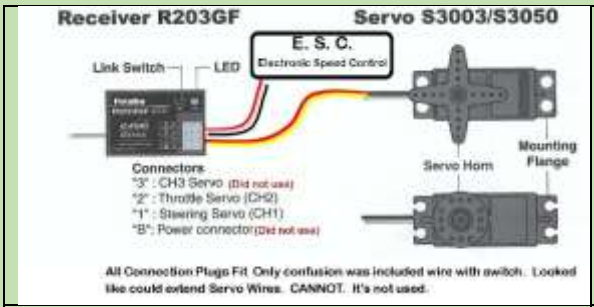
“Stuffing Box” was secured in place by “tacking’ with spots of 5-minute epoxy, Used the hose coupling supplied to align motor with stuffing box.	
	The wood Skeg was Epoxied in place. Then a triangular piece of fiberglass was placed over the Stuffing Box tube and Skeg. Bob Smith Epoxy was brushed onto the fiberglass, full strength.
Mounted the brace for the steering servo as instructed. As can be seen in Pic, I used JB Weld to assure a leak proof seam on the Brass rudder tube and wood supports block.	
	Bent the brass rod steering control arm to their print. I will adjust, if needed, when on the Lake to be sure it goes straight when control is in neutral position. I screw visible on top holds the steering arm and can easily be adjusted if needed.

Thought I might get a larger capacity Lithium Metal Hydride battery. But then thought smarter for weight and compatibility with other electronics to use their recommended NiCad battery!	
	Front Seat bracket was assembled with 5 Minute Epoxy for added strength.
Rear seat 1st made per instructions, then decided the rear needed to be attached directly to the bottom as needed room to battery. So removed the wire bracket I had made and 5-Minute Epoxied back to bottom	

	Decided small magnets would hold it in position to the Rear Hatch. So, the thin back was increased in thickness on top with a ¼ inch piece of Basswood. It helped hide the small magnets. Also matched the front seat back thickness.
To have the rear rounder Epoxied a piece of 1/2 round white plastic supplied for the Rub Rail. Primed the assembly	
	After sanding with 60, then 100, then 150 grit, time for primer. Decided to use a filler primer. Perhaps a bit too heavy. When sanding to the finished 220 grit excess came off as a fine powder. But worked, as it was smooth when sanded with 100 grit. Most of the filler primer was removed. This left only the low spots filled. Some of the various prior DAP Plastic Wood, Bondo, and Red Glazing Putty was all visible! I final 220 grit was used prior to color painting.

This one-part primer color Rust-Oleum was selected for the Red, White and Blue needed	
	Prior to painting made these masking paper "open boxes." They were taped into the cockpit openings. **These masking "boxes" were placed between Hatches where the rear seat is located AND the front cockpit opening.** **Also bought small bottles of Testers model paint in Red White and Blue. White was perfect, Red close and Blue not dark enough. Was no problem as I have done with other model, just sprayed some Blue from the rattle can into the cap and used it for touchup!**
Three coats of white were applied first for the deck and hatch covers.	

	Masked White Strips and sides of deck before spraying Red
Decided best to just use red for bottom paint as well.	
	Masked bottom in Prep for Blue Sides. After using masking tape on the top edges, used paper taped to Deck to mask the hull top.
Time to add electronics. Diagram from purchased Power kit helped with overview. Mounted electronic control and motor speed control to right side of hull on wood shelf glued to side. Used Velcro on E.S.C control bottom to shelf.	
	To reduce chance of interference between motor and radio wiring followed a suggestion of putting "Dirty Motor Wiring" on one side and "Clean Radio" wires on the other.
Attached Receiver Control (light green) with Velcro to Upper Left Inside of Hull. Antena going straight back. Steering Servo in Blue wire cover and attached with Velcro to deck underside. Attached the Receiver Power wire from electronic control with Velcro to deck bottom.	



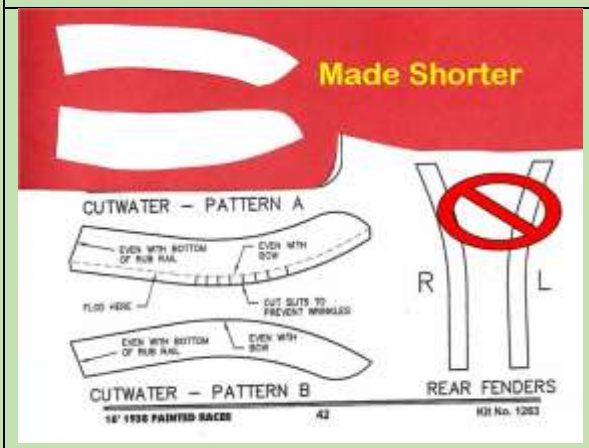
Initially had error on how connections were made to receiver.
Connection 3 NOT USED.
Connection 2 to throttle servo
Connection 1 to steering servo
Connection "B" NOT USED

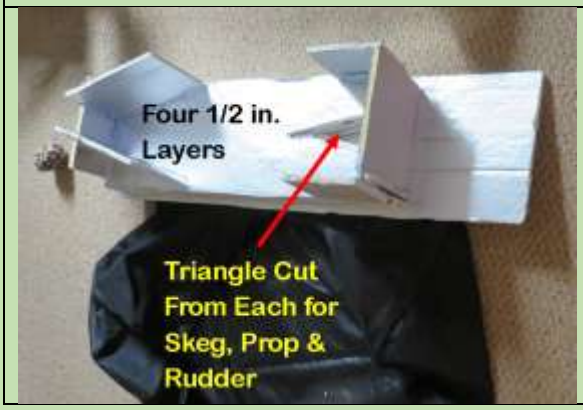
Battery attached to bottom hull using Velcro over added 1/8" planks.

Overall wiring is very neat. The power switch attached to side E. S. C (Electronic Speed Control) is readily accessible when front hatch is removed. Marked OFF position with small sticker.

Attached Hardware using JB Weld. Takes a day to fully cure but compared to 5 Minute epoxy holds stronger to paint and metal. Also, the 30-minute cure time gives part, time to be properly aligned using thin blue painter tape.
I make an error in the Bow Light! I placed the fitting that was to hold the flag and be further back, on the Bow.

Error occurred, partly because I did not want to use a front flag BUT mostly by mistake.
Looks fine.

1st attached the hatch handles 6 base posts to two-sided tape on cardboard. Then used 5 Minute Epoxy to join the 1/8" aluminum tubing sections to the base posts. Also inserted pins (in my case with small round heads) into the ends of the tubes with epoxy. When fully cured cut carboard and tape so each base was separate and peeled away. Attached handles to hatch with JB Weld.	
	One of the last things to install was the Cut Water. It helps water split at the bow. Made pattern from paper using what was supplied (lower Pics.) Found it was longer than I thought best. Shortened (upper Pics are adhesive cover paper removed from the 0.002" aluminum supplied. Slit the 1st side as shown. Used round pencil eraser and smooth pencil body to make both adhere. Thought boat looked better WITHOUT rear fenders!
Smoothing the aluminum with a mechanical pensile eraser and round plastic pencil. That removed 95% of the wrinkles. Would not want the Cut Water going any further under the Hull.	
	First Test in water. It floats!

Sits very level with water line. No extra balance weight needed!	
	Finally, off of Build Board!
Made Boat Carrier from INFANZIA Duffel Travel Sports Equipment Bag with Upgrade Zipper Water Resistant, Extra Large Foldable. $19 on Amazon. **Bought 4 X 8 sheet of ½ inch foam board insulation to make the interior to hold the Chris Craft securely. $13 at Home Depot**	
	**Cut 1/2" foam sheet with Box Cutter. Can cut both top and bottom if careful. Go slow.** **Or just cut top and bend to break.** **Bottom Base Board 39" X 10" it's 2" short to fit easily.** **Four Fill Boards are 9" wide.**

The Bow section inserts 1st. The 5' high side boards help keep boat centered. **This is a better view of open triangular sections where Skeg, Prop and Rudder fit.**	
	The rear slips in next.
The Boat fits loosely but well secured. **Note, room for Remote Control as well as some maintenance wrenches etc.**	
	But What If the Chris Craft Stranded on Lake? **Bought Rescue Tug Boat! Only $36 with Remote Control!**

Fellow made YouTube video showing how he added 4 large floats to ~6-foot string. He drove the tug boat around the Stranded Boat and the string snagged rudder propeller etc. Once snagged dragged Stranded Boat to Shore	
	I added 2" long stainless braded cable to rear Tug stern hole with loop on end to accept fishing lure clasp. Then added braded cord to fish lure clasp. Put 7 foot of cord with lanyard (noose) knot on fishing lure clasp. Attached 4 fish line floats to line 18 inch apart.
Tug comes unassembled BUT just Snap together no glue. Has Li-Ion battery and charging cable. Two AA needed for Remote Control. Found Li-Ion battery drains just for receiver as no off-on switch. Best charge for 90 minutes (until red light is off) and only connected to Tug when ready to drive.	
	Small. But should have sufficient power to tow Chrit Craft if Stranded. The small remote control uses two AA batteries BUT has and Off/On switch. They do not drain with switch off.

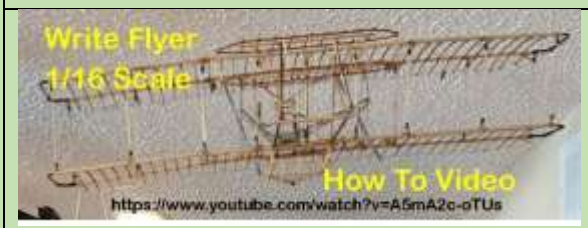
Will Add More Pics After It's Madden Drive On Lake Our Home Is On!

Been retired since 2000. Have time for some fun model builds.

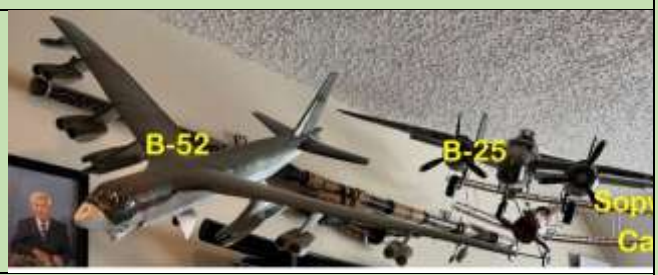
Plane models started because I found some WWII Engine parts on E-Bay. A Cylinder from the 18 in the Pratt & Whitney R2800 that was in the Corsair Fighter in WWII. Also, a Master Connecting Rod and Piston. Bought NOS Valves that were still available "cheap." One Piston (right) still in Cosmoline grease preservative.

Then thought why not build a model plane that used the R2800 (which is 2800 cid.) At the start of the War, it was rated at 1800 hp. By War's End If being pursued by an enemy plane the usable hp was 3,400 hp! That was achieved using boost normally only allowed at low altitude and water-methanol injection. BUT IF used, the engine had to be rebuilt. But you were alive to have that done!
Funny, bought a NOS sparkplug for ~$10 in the original sealed package. It has 4 ground electrodes like some advertised today! Those engineers knew what they were doing.

That lead to building more WWII Planes. Many using air cooled radial engines. This is the largest plastic model plane made. It's by HK Models and this B-17 Flying Fortress has a wingspan of 38.6 ".



A fun but difficult build was the Write Brothers 1st plane the Write Flyer. I made a video of this somewhat tedious build:
https://www.youtube.com/watch?v=A5mA2c-oTUs
This is a Doc as PDF:
http://netwelding.com/Wright_Brothers_First_Airplane.pdf

This is the 1st Plane to bomb Japan. Jimmy Doolittle B-25 Raid! Also, a B-52 and a recent addition a WWI Sopwith Camel. The Plane Snoopy Use to shot at the Red Barron	
	Found the pilots (like Snoopy) had that long scarf because the rotating air-cooled radial engine cylinders (crank fixed) used castor oil as a lubricant mixed in gas. Was getting over their goggles so the long scarf was used to wipe them clean. They also all had diarrhea!
Another WWII radial engine Plane, the P-47. It was heavy but compared to the Japanese Zero it could handle being shot and stay airborne! A friend who had been in the Airforce commented about the large size of new fighter planes. Built this F-18, same 1/32 scale as the WWII fighters. It's big. Was intrigued by the flying wing that came out at the end of WWII.	
	Saw the massive size of the Howard Hughes Spruce Goose. Made a 1/200 scale model. If it was the scale of most of my other plane models, 1/32, the wingspan would be almost 10 feet hanging from my ceiling! For comparison made a 1/200 scale Boeing's new 777-300. It has Boeing's widest wingspan of 212 feet. The Spruce Goode has a 330-foot wingspan. Limberg's Sprit of Saint Lewis is similar scale to most of the models. It's small.

The massive B-29 is only 1/48 scale since that is as big as they could make it! There are two Korean War Jets in comparison.

When the F-22 Raptor shot down the Chinese Spy ballon, I built a model of it and balloon. The balloon size was taken from press Pics/Info. It's near one of the fastest planes ever built the 1959 X-15 rocket plane that went 4,520 mph. It jettisons the lower Tail fin that I recovered!

The 1964 Blackbird is still the fastest air breathing plane. It went 2,200 mph. The titanium body expands so much when at high-speed temps it actually leaks fuel on the ground!

The CH-47 Chinook helicopter can lift 50,000 lbs. That includes its own weight. But externally and internally loaded it can lift ~27,700 lbs. Saw a Pic of it carrying a Swedish Bandvagn 206 snow and ice vehicle so made both. It weights fully loaded 12, 418 lbs. Easy to transport.
The Apache is what my friend's son flies for the SC National Guard.

WA Technology

GSS™ Ideal For Home/Small Shop Welders

Our *GSS (Patented Gas Saver System)* is ideal for home/small fab shops MIG welders. It cuts gas use in HALF or more and improves weld start quality.

Home Shop MIG welders typically use smaller volume gas cylinders, make shorter welds and tack welds. The *"gas blast"* at every weld start not only wastes gas it leads to excess spatter, poor weld shape, and possibly internal porosity. This high starting gas flow surge pulls air into the shielding gas stream. The turbulent flow created, lasts for a short time even after flow rate reduces to the desired laminar flow set on the flow control. This inferior gas shield exists for much of a short weld! Peak flow rates can exceed 150 CFH.

Reducing the starting gas surge provides better weld quality while still using less total gas!

Our FB3, FB4 and FB6 etc *GSS's* are supplied with threaded CGA 032 "B" fittings used on most US made and Harbor Freight Vulcan & Titanium welders and cylinder regulators. If you have these fittings on both welder and cylinder flow control then simply screw in these "B" fittings. The hose fitting on the welder end has a Shielding Gas Peak Flow Limiting Restrictor.

Testimonials

Al Hackethal purchased a 3 foot, FB3 *GSS*. He emailed: *"Well, I can't believe it. I never thought a hose could make that much of a difference. The weld quality (with the GSS), and even penetration is considerable better. Almost no spatter! Initially thought that my imagination had kicked in, but then realized that the gas I'm buying is actually working the way it's supposed to. Glad I found your website. This is one of the few things that really works better than any info could suggest.*

Another user, Beau Straley has a 4-foot GSS. He emailed and reported over 60% gas savings stating: "It not only saved shielding gas, but it increased my confidence. That's a winning combination in my book! Thank you for a wonderful product that actually does what you say it will.

With the GSS I was confident I was not wasting gas and increased the gas flow rate. The result was the appearance and quality of my welds improved dramatically."

Another customer, Jason Insley, had this to say:

"Everything worked fine. And my weld starts have definitely improved since installing the GSS. Thanks again."

Patented GSS

The patented *GSS* reduces shielding gas waste by utilizing a smaller diameter gas delivery hose that reduces the *"Gas Blast"* at each weld start by over 80%. This reduces the gas surge and waste.

The peak flow restriction orifice in the welder end of the hose helps reduce gas waste and improves weld start quality by limiting peak flow rate turbulence.

The small ID is sufficient size for fabricators using a 50+ foot *GSS* at flow rates of 50 CFH!

Measured Industrial Production Result

Our website; www.NetWelding.com has much more *GSS* information including examples of customer gas savings they reported. They typically report 40 to 50% savings and when making many short welds, over 60%. One user reported welding 632 small parts with one gas cylinder that with their standard gas delivery hose required 2.7 gas cylinders to weld that same number of parts!

BOTTOM LINE

The *GSS* cuts gas waste using a small ID, heavy wall thickness hose incorporating a peak gas flow rate limiting peak flow restrictor. This cuts starting gas surge by over 80%. *Over 15,000 are in use.*

The *GSS* provides better quality weld starts by reducing shielding gas turbulence. For short welds, excess turbulence can last for much of the weld.

It can pay for itself in one gas cylinder refill.

Improve Weld Quality - -Cut Gas Waste

US Patent # 6,610,957

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