

Status	Approved	Date:	7/5/2021
By:	Jeff Spira	Pages:	1 of 3
File:	BR-002 Outboard Power.docx		

Outboard Power for Your Boat

By Jeff Spira

I get questions all the time about maximum and minimum sized outboards for homebuilt boats. These things are rather hard to determine unless you know a lot about the boat, the type of water, and the boat owner's preferences. There are certain guidelines however that you can calculate to determine the maximum power based on both the US and Canadian Coast Guard recommendations.

The Coast Guard calculations are based on boat hull shape, boat length and the boat's transom width. It is explained in the US Coast Guard's publication, Safety Standards for Backyard Boat Builders. I provide a link to a pdf file of their publication on the Free E-Books, Videos and Reports page of the Spira International Web Site. In addition to horsepower recommendations, the Safety Standards also include recommended flotation, loading, identification, ventilation, and other safety recommendations for homebuilt boats. It's a worthwhile read for anyone considering building a boat.

For those who are math challenged, I've run the basic calculations for my power boat designs, in a spreadsheet, and also added my recommended power for these designs. Some boats, such as the Carolinian and Tillamook offer two calculation methods. The first is for flat bottom. This implies a 15" transom opening and tiller steer. The 20T / Remote is the calculation for boats using a standard shaft motor, 20" high opening in the transom, and remote steering, such as a center console or pilothouse.

Status	Approved	Date:	7/5/2021
By:	Jeff Spira	Pages:	2 of 3
File:	BR-002 Outboard Power.docx		

Boat Max Horsepower Calculation

Based on US and Canadian Coast Guard Recommendations

Spira Int'l Boat Name	Calculation Method	Overall Length	Width Transom	Calculated Factor	CG Rec Max HP	Spira Rec. HP
Pacific Power Dories						
Cheyenne	Flat Bottom	12.0	4.7	56.4	13	9.9
Cheyenne	Remote / 20T	12.0	4.7	56.4	23	15
Seneca	Flat Bottom	14.0	5.0	70.0	20	15
Seneca	Remote / 20T	14.0	5.0	70.0	50	40
Tillamook	Flat Bottom	16.5	5.7	94.1	32	20
Tillamook	Remote / 20T	16.5	5.7	94.1	98	50
Albion	Flat Bottom	18.9	6.8	128.5	49	40
Albion	Remote / 20T	18.9	6.8	128.5	167	65
Winchester	Remote / 20T	23.2	7.0	162.4	235	75
Offshore Pacific Power Dories						
Kootenay	Remote / 20T	15.0	5.0	75.0	60	40
Courtenay	Remote / 20T	16.5	5.7	94.1	98	65
Anacapa	Remote / 20T	18.9	6.8	128.5	167	75
Farallon	Remote / 20T	23.6	7.3	172.3	255	100
Sitka	Remote / 20T	27.0	8.0	216.0	342	120
Kodiak	Remote / 20T	32.0	10.0	320.0	550	175
Carolina Dories						
Pescadero	Flat Bottom	14.2	4.2	59.6	15	9.9
Oysterman	Flat Bottom	16.1	4.2	67.6	19	15
Carolinian	Flat Bottom	18.1	5.0	90.5	30	20
Carolinian	Remote / 20T	18.1	5.0	90.5	91	40
Caladesi	Flat Bottom	20.0	5.5	110.0	40	25
Caladesi	Remote / 20T	20.0	5.5	110.0	130	75
Key Largo	Flat Bottom	24.0	5.6	134.4	52	50
Key Largo	Remote / 20T	24.0	5.6	134.4	179	75
Bahaman	Remote / 20T	27.0	6.4	172.8	256	90
V-Bottom Carolina Dories						
Alamitos	Remote / 20T	15.0	5.7	85.5	81	40
Kachemak	Remote / 20T	17.0	5.0	85.0	80	50
Hatteras	Remote / 20T	19.0	5.6	106.4	123	75
Chesapeake	Remote / 20T	24.0	5.6	134.4	179	90
Clemente	Remote / 20T	24.0	6.4	153.6	217	100
Pangas						
Bahia	Remote / 20T	12.0	3.6	43.2	26	9.9
Robalo	Remote / 20T	16.0	5.0	80.0	70	25
Veracruz	Remote / 20T	18.0	6.5	117.0	144	40
Quintana	Remote / 20T	19.2	7.0	134.4	179	65
Tiburón	Remote / 20T	21.0	7.0	147.0	204	75
Ixtapa	Remote / 20T	23.0	8.0	184.0	278	90
Manzanillo	Remote / 20T	26.0	8.0	208.0	326	150

Status	Approved	Date:	7/5/2021
By:	Jeff Spira	Pages:	3 of 3
File:	BR-002 Outboard Power.docx		

Skiffs						
Champlain	Flat Bottom	11.5	3.8	43.7	7	5
Walden	Flat Bottom	13.0	4.2	54.6	12	7.5
Hudson	Flat Bottom	15.8	4.9	77.4	24	9.9
Kennebeck	Flat Bottom	18.0	5.2	93.6	32	15
Power Drifters						
Rogue	Flat Bottom	15.8	4.5	71.1	21	15
Glacier Bay	Remote / 20T	28.0	5.0	140.0	190	90
Valdez	Remote / 20T	28.0	5.5	154.0	218	120
Garveys						
Avila	Flat Bottom	12.2	4.8	58.6	14	9.9
Nola	Flat Bottom	14.1	5.2	73.3	22	15
Wye River	Flat Bottom	16.2	5.7	92.3	31	20
Wye River	Remote / 20T	16.2	5.7	92.3	95	50
Galveston	Remote / 20T	18.5	6.8	125.8	162	65
Puchie Special	Remote / 20T	23.0	8.0	184.0	278	90
Mobile	Remote / 20T	27.0	8.0	216.0	342	120
Ultralights						
Mini Miss	Flat Bottom	7.0	2.4	16.8	N/A	2.5
Back Bay	Flat Bottom	7.5	2.4	18.0	N/A	2.5
Mission Bay	Flat Bottom	11.0	4.0	44.0	7	5
Maxi Miss	Flat Bottom	14.1	4.0	56.4	13	9.9
Minutemen	Flat Bottom	13.3	3.5	46.6	8	5
Flats & Bayou Boats						
Chalmette	Flat Bottom	14.0	3.5	49.0	10	5
Ka Joe	Flat Bottom	18.2	3.4	61.9	16	9.9
Bayou Jubilee	Remote / 20T	18.0	5.1	91.8	31	15
Sabine	Remote / 20T	19.0	6.3	119.7	149	40
Duck Boats						
Marsh Rat	Other	12.9	3.1	40.0	7	5
Capybara	Other	18.0	4.0	72.0	33	25
Misc Other Boats						
Cape Cod	Other	15.2	2.3	35.0	3	2.5
Crawdad	Other	14.2	4.2	59.6	23	9.9
Fiesta Bay	Other	13.0	6.0	78.0	37	20
Havasu	Other	10.0	4.5	45.0	11	9.9
Skeeter	Remote / 20T	16.0	6.7	107.2	124	50
Okechobee	Remote / 20T	19.0	7.0	133.0	176	75
Bird Rock	Remote / 20T	22.2	7.9	175.4	261	90
Oscoda	Remote / 20T	16.1	6.7	107.9	39	25
Endurance	Flat Bottom	15.3	3.2	49.0	9	25