

Bear-Cat Aluminum

Bill of Materials

The following listing is to serve as a general guide only for hull cost estimating purposes; do not use for buying materials without first checking the instructions and plans for various options (such as differences due to changes in powering methods which will vary each boat), and to local suppliers for what material sizes may be available. In other words, each builder must make decisions as to how he will build the boat and use materials, and then take off a listing to suit. Note that if the length of the boat is varied, so too will the material listing. Materials are listed for the basic hull members only and do not include options, variations, interior members, etc. Thus the listing will vary and not all members are necessarily included - check the plans. Only marine alloy of the 5000- or 6000-series should be used. Common acceptable alloy designations include 5052, 5083, 5086, 5454, 5456, and 6061. For saltwater use, the 5086 is recommended except that extruded shapes can be 6000-series. While full-length hull plating panels can be formed by welding, single long panels are preferable to performing this procedure. In any case, the builder should check for plate or sheet size availability and plan the material utilization for minimum waste. While shorter members can always be butt welded to form long members, a doubler plate is usually advisable behind or on top of all such joints, lapping a considerable distance, and being welded all around.

MEMBERS	SIZE/TYPE	AMT RQD
Chine bars	1/2"-3/4" round bar	92'
Sheer	1-1/2" Sch. 40 pipe	60'
Tunnel, cockpit corners	3" Sch. 40 pipe	26'
Keels	3/8" x 3" flat bar	33'
Stems	3/8" plate	2' x 10'

Spray deflectors	1/4" x 1-1/2" flat bar	92'
Longitudinal stiffeners	1/4" x 1-1/2" flat bar	480'
Cockpit sole and lining stiffeners	1-1/4" x 1-1/4" x 3/16" angle	300'
Decking stiffeners	1/4" x 1-1/4" flat bar	60'
Bulkhead & misc. stiffeners	1/4" x 1-1/4" 1/4" x 2"	80' 200'
Transom cross beam	6" x 2.034" x .314 channel	10'
Transom	1/4" plate	2'3" x 10'
Bulkheads	.188"	110 sq.ft.
Frames	1/4" plate	130 sq.ft.
Bottom plating (hulls)/motor wells	.160" or .188"	1 @ 5' x 26'
Tunnel plating	.125"	Varies from 4' to 7' wide x 26'
Tunnel side plating	.125"	1 @ 4' x 26'
Side plating	.125"	2 @ 4' x 26'
Upper side, cockpit lining, side decks	.100"	2 @ 4' x 22'
Cockpit sole	.125" diamond plate or equal	3 @ 3' x 22'

Foredeck	.125"	1 @ 3' x 10'
Tanks	.125"	46 sq.ft.

Bear-Cat Cuddy Aluminum Bill of Materials

MEMBERS	SIZE/TYPE	AMT RQD
Chine bars	1/2"-3/4" round bar	102'
Sheer	1-1/2" Sch. 40 pipe	66'
Tunnel, cockpit corners	3" Sch. 40 pipe	29'
Keels	3/8" x 3" flat bar	33'
Stems	3/8" plate	2' x 10'
Spray deflectors	1/4" x 1-1/2" flat bar	102'
Longitudinal stiffeners	1/4" x 1-1/2" flat bar	530'
Cockpit sole and lining stiffeners	1-1/4" x 1-1/4" x 3/16" angle	330'
Decking stiffeners	1/4" x 1-1/4" flat bar	60'
Bulkhead & misc. stiffeners	1/4" x 1-1/4" 1/4" x 2"	80' 200'

Transom cross beam	6" x 2.034" x .314 channel	10'
Transom	1/4" plate	2'3" x 10'
Bulkheads	.188"	110 sq.ft.
Frames	1/4" plate	130 sq.ft.
Bottom plating (hulls)/motor wells	.160" or .188"	1 @ 5' x 29'
Tunnel plating	.125"	Varies from 4' to 7' wide x 29'
Tunnel side plating	.125"	1 @ 4' x 29'
Side plating	.125"	2 @ 4' x 29'
Upper side, cockpit lining, side decks	.100"	2 @ 4' x 24'
Cockpit sole	.125" diamond plate or equal	3 @ 3' x 25'
Foredeck	.125"	1 @ 3' x 10'
Tanks	.125"	52 sq.ft.
Cabin side	.125"	80 sq.ft
Cabin front	.125"	12 sq.ft.
Cabin top	.125"	28 sq.ft.
Cabin bulkhead	.125"	34 sq.ft.

Stiffeners, beams	3/16" x 1-1/2" flat bar 3/16" x 2" flat bar	60' 80'
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