

5.28m One-Hatch Baidarka

—LINES & BODY PLAN—

Scale 1:1 & 1:8

DIMENSIONS:

Length: 5.28m/17.32 ft.
 Beam: 58cm/22.75 in.
 Depth: 26cm/10.25 in. (sta. 4.5)

MATERIALS:

Keel (Ø), Gunwales (IV):
 0.75-in. OD x .049-in. wall
 6061-T6 aluminum tubing,
 14.96m/49.1 ft.=3.53kg/6.23lb.

Ribs, Hatchway frame,
 Stringers nos. I, II, III, V:
 0.5-in. OD x .049-in. wall
 6061-T6 aluminum tubing,
 47.15m/154.7ft.=7.35kg/12.68lb.

Flatware (incl. rudder, coaming):
 .063-in 6061-T6 aluminum sheet
 3465 sq cm = 1.54kg
 537 sq in = 3.73 lb.

Structural lashings, skin sutures,
 & other joinery: 45-lb test
 braided nylon, hollow core.
 500 yds = .2kg = .4 lb.

Hatch coaming rim: 3/4-in.
 (18mm) braided nylon
 (or polyester) rope.
 1.8m/6 ft = .45kg/1.0 lb.

Skin fabric (hull & deck):
 14.2-oz single-weave nylon, 68"
 width, uncoated, greige or heat-
 set, sewn and shrunk to fit.
 55 sq ft = 2.53kg = 5.6 lb.

Keel wear strip: 1.5-in nylon
 webbing: 18 ft = 0.3 lb.

Skin coatings, elastomeric
 (Neoprene, Hypalon, or
 Polyurethane) applied by brush:
 1 to 2 gallons required, finished
 coating weight of 1 to 2 oz/sq ft
 = 2.35kg/5.16 lb. (@1.5oz/sqft)

DISPLACEMENT (Bare Hull):

Skeleton: 10.3kg = 22.7 lb.
 Skin: 5.5kg = 12 lb.
 Total: 15.8kg = 34.8 lb.

SYNOPSIS:

A hybrid of design elements both new and old, this kayak's lineage is indirectly reminiscent of a variety of historical designs. The hull sections represent a working compromise between the swift (but unstable) form of traditional Aleut hunting vehicles, and the more stable (but less easily driven) sections found in the cargo-carrying doubles and triples popular during the Russian-American period. The stern is of classic Aleut "shouldered" form, while the bow represents a more recently evolved (or corrupted) interpretation that does not correspond with any of the known historical forms.

The rudder appended here—a compromise between rudder and no rudder—is intended to trim the helm in the style of the trim-tab rudder popular on Aleut baidarkas of the late 19th century.

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—George B. Dyson
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