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**June 2, 2015**  
**Specification And Quotation**  
**For One**  
**34' PackMan Landing Craft**  
**For**  
**HBRK Associates Inc.**  
**Contact: Richard Kahn**  
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**OVERVIEW:** The following describes a 34' PackMan welded aluminum high speed landing craft 2015 production model. The crafts' design and construction (hull, machinery, and electrical systems) shall comply with the USCG and ABYC regulations where applicable. Detailed drawings will be submitted for approval prior to construction. Boat shall be delivered as a complete turn-key unit ready for service.

### **GENERAL SPECIFICATIONS:**

1. Hull Length: 34 feet
2. Beam: 10 feet
3. Transom Deadrise: 16 degrees
4. Person and Cargo Capacity: 5000 lbs
5. Propulsion: Twin 300hp YAMaha Four Stroke Outboard Motors
6. Fuel Capacity: 200 gallons
7. Bow Door Clearance: 48 inches
8. Bottom Plating: 1/4 inch 5086-H116
9. Side Plating: 1/4 inch 5052-H32
10. Deck Plating: 3/16 inch 5052-H32
11. Centerline Vertical Keel (CVK): 1/2" x 4" 6061-T6

### **HULL PACKAGE:**

34' PackMan modified vee hull landing craft incorporating a 48" wide bow door.

Hull shall include three structural bulkheads; the forward collision bulk head shall be watertight, the aft bulkheads shall be limbered for drainage via bilge pump.

8" welded aluminum inspection hatches shall be installed to provide access to all below deck

compartments.

Six (6) 10" welded aluminum cleats shall be installed. (3 Per Side)

A ¾" aluminum double padeye shall be welded on centerline of the bow.

The transom shall be setup with an outboard motor bracket that is integrated into the swim step. The bracket shall set at 103 degrees off baseline for proper outboard trim.

The stern shall incorporate a full width cross seat/locker. Lockers will house batteries and fuel filter systems and offer general storage. Locker will have two (2) weatherproof and lockable aluminum access hatches.

Gunnel decks shall be 5.25" wide from transom to bow.

### **WELDING:**

The hull and superstructure shall be constructed of marine grade aluminum and MIG welded throughout.

All weld seams in the hull shall be welded 100%, both interior & exterior.

All welding shall be performed in accordance with American Welding Society D1.2-2003 procedure qualifications.

### **HULL OUTFITTING:**

1¼" Sch 40 pipe safety railings shall be installed 36" above main deck along port & stbd sides from stern to midship.

One (1) Divers Dream 5 lb zinc anode shall be installed on a bracket that is welded to the transom.

Four (4) 2" x 7" open scuppers at midship, two (2) 3" pipe drains in the stern, and two (2) 1" pipe drains at the bow shall create a self-bailing main deck. Drains and scuppers shall be sized and installed in accordance with ABYC deck drainage requirements.

One (1) 1/4" x 4" Beaching wear plate shall be installed on the bow forefoot.

Large 4" D-rubber push knees shall be installed on the port & starboard sides of the bow door. Push knees shall be ¼" plate double wall construction and shall extend down near the waterline for pushing up to docks.

### **FOAM COLLAR SYSTEM:**

Gilman Corp. 12" x 6" half round Softlite Ionomer Foam fendering shall be installed at the gunwale from the transom to the bow push knees.

The Foam collar shall be attached to the hull via continuous capture rail slots on top and bottom. 1.5" aluminum angle shall be continuously welded to the hull on the top and bottom. A 3" aluminum flatbar shall be installed in the lower section capture rail slot and secured with 316

stainless steel fasteners allowing the foam collar to be easily removed or replaced.

The Gilman fendering system shall be capable of absorbing extreme impact loading and abrasion to protect the hull from damage during boarding operations.

The Gilman fendering system is a readily available off-the-shelf product and easily replaceable without any special tools.

3M Marine Protective Tape shall be installed on the hull sides behind the foam collar to prevent crevice corrosion.

### **BOW DOOR OUTFITTING:**

A 48 inch wide drop down bow door shall be installed to enable personnel transport.

The hull shall incorporate port and starboard bow lockers framing the door opening.

12V electric-over-hydraulic rams shall be installed to operate the bow door.

The bow door shall be outfitted with two (2) ¾" stainless steel positive locking pin to prevent the bow door from opening while underway.

A replaceable rubber gasket seals the bow door watertight when closed.

The inside face of the bow door shall be double plated for a smooth working surface.

Switches to operate the bow door shall be installed locally and at the main console.

Johnson Duramax DB-503 3" D-rubber fender shall be installed on the leading edge of the bow door.

### **FUEL SYSTEM:**

A 200 gallon non-integral fuel tank shall be installed complete with fill, vent, 12V sender and fuel level gauge on console. Fuel tank shall be built from ¼" plate, pressure tested to 4 psi and bolted into hull framing using doublers and stainless steel fasteners.

Two (2) Racor fuel filter/water separators installed complete with shut off valve.

12V 140 CFM bilge blower installed in fuel tank compartment.

Fuel system shall comply with U.S. diurnal emission standards.

### **WHEELHOUSE:**

A 84" wide x 96" long x 80" tall walk through wheelhouse shall be installed. House is constructed from .190" plate and framed as per std. house framing using 1.5" square tube.

Cabin shall have forward cuddy with V-berth. Access to V-berth shall be on centerline under windshield between pilot & co-pilot seats

House is equipped with a Diamond Seaglaze aft sliding door. Door shall be equipped with a window and lock.

House has aluminum framed sliding windows installed forward on port and starboard sides, remaining windows are fixed aluminum framed style.

The wheelhouse roof is outfitted with 1" pipe top railing.

The house deck is non-skid coated.

An aluminum control console with angled face and an overhead radio bar shall be installed in the wheelhouse on the starboard side. The design will allow the operator to easily steer while both sitting & standing.

A Co-pilot console with storage shall be installed opposite the main console.

The wheelhouse interior shall be insulated with 1.5" Navyboard fiberglass insulation and paneled with 1/8" white perforated aluminum sheeting with sound deadening liner.

1" pipe overhead grab rails shall be installed on centerline inside the wheelhouse and the cuddy.

Pipe ladder rungs shall be welded to the port and starboard side of the wheelhouse to provide access to the roof.

Two (2) Bentley Rivermaster captain seats shall be installed in the pilot and co-pilot positions on welded aluminum seat boxes with storage below. Seats incorporate stationary arm and backrest, 7 1/2" slide, and Garelick footrest.

Two (2) Seat storage lockers shall be installed in the wheelhouse aft of the captains seats (1 Port, 1 Starboard). These includes a 3" seat cushion and backrest with 2" back cushion. Access to storage is provided through aluminum hatches on the face of each locker.

Two (2) Seat storage locker shall be installed in the cuddy (1 Port, 1 Starboard). These includes a 3" seat cushion and backrest with 2" back cushion. Access to storage is provided through lift up seat cushions.

### **HEATING AND AIR CONDITIONING:**

A Webasto AT3900 forced air diesel fired cabin heater shall be installed complete with thermostat, two (2) outlets located at windshields (with one dedicated to the pilot windshield) for defrost, and one (1) at deck level. Fuel to be supplied by a 5 gallon diesel tank.

### **TOWING:**

4" Sch 80 aluminum pipe tow bit with 1" 316 stainless crucifix pin installed aft on centerline. The towing bit shall be sized to accept one round turn and three figure eight's of the towline.

### **STERN GUARDS AND PLATFORMS:**

A full width welded aluminum swim step with non-skid shall be installed on the transom.

A fixed aluminum guard made from 2" aluminum pipe shall be welded to the transom to protect the outboard motors.

### **ELECTRICAL SYSTEM:**

The vessel's electrical system shall be 12vDC.

All electrical cable shall be marine grade copper tinned boat cable and labeled for each circuit.

Cables should be routed in wireways wherever possible. Wherever exposed to potential damage, cables shall be protected with rubber.

Electrical cable shall be sized in accordance with the American Boat & Yacht Council.

All electrical cables shall be marked in accordance with the markings in electrical drawings.

All electrical switches shall be of a heavy-duty type and properly insulated.

The electrical system shall be grounded. In any case the hull shall not be used as part of a galvanic feeding loop.

### **12V DC ACCESSORIES:**

One (1) 12V 8 position distribution panel shall be installed on the console.

Two (2) 12v self-parking windshield wipers shall be installed on the forward windows.

Two (2) 12V power receptacles with weather cover shall be installed on the console.

One (1) 12V air trumpet horn shall be installed with momentary push button on dash.

Two (2) 12V 2200 GPH bilge pump shall be installed with auto float switch.

### **LIGHTING:**

Navigation lights shall be installed to USCG requirements.

Two (2) 12V LED red/white dome lights shall be installed in the wheelhouse.

Four (4) Flood lights shall be installed on the wheelhouse roof.

One (1) Go Light 2020 search light shall be installed on the wheelhouse roof with a control pad on the console.

### **NAVIGATION ELECTRONICS:**

A Garmin 1040xs - 10" screen GPS Plotter/Sounder/radar shall be included. Includes U.S. coastal area map, GSD 22 Sounder, Transom Mounted Transducer, 18" radar dome, and installation.

The Radar Dome shall be mounted to an aluminum plate radar arch on the wheelhouse roof.

**PAINT, GRAPHICS, AND MARKINGS:**

Matson Industrial Floor Grip Non-skid deck coating applied to all walking surfaces .

Cabin interior components painted Zolatone speckle gray.

E-Paint anti-fouling bottom paint system with epoxy barrier coat applied to 4" above waterline. (Black)

Top side of hull to remain bare aluminum finish.

**PROPULSION:**

Twin 300hp Yamaha counter rotating four stroke outboard motors with 30" shaft (F300UCA, LF300UCA) shall be installed complete with gauge package, fuel management system, Digital Electronic Controls (DEC), dual key switch panel, power trim and tilt, harnesses, and stainless steel props.

Motors shall be installed complete with Teleflex SeaStar hydraulic steering. Includes installation of helm, cylinder, tie bar, two group starting 27 batteries with selector switch.

**SEA TRIALS:**

Vessel shall undergo testing (Sea Trials) after completion to verify proper function and performance of all systems.

**DOCUMENTATION:**

One (1) Operation & Maintenance Manual shall be supplied with the craft. Includes OEM technical literature for all supplied equipment, operator/safety instructions, as-built boat drawings, as-built electrical system drawings.

Original Bill of Sale and Manufacturer's Statement of Origin documents shall be delivered with the boat conveying free and clear title(s).

**WARRANTY:**

The William E. Munson Company, Inc. (Munson Boats) warrants the aluminum construction and equipment installation against manufacturer defects for a period of 12 months from the time the vessel is put into service.

**TOTAL PRICE, F. O. B. BURLINGTON, WA: \$238,817.00**

For William E. Munson Company,

Jon Wise, President