

# “HANDYSIZE” SERIES

This versatile “green” tug, has just the right power and size to handle most jobs at the lowest operating cost.

The “HandySize” Class Tug was designed by Jensen Marine Consultants Inc. and built by Great Lakes Shipyard® to fill the niche between the 2,800 to 3,200 HP market for harbor work, fireboats, and construction operations as well as coastal towing. It is 74 feet long, has a beam of 30 feet, and a design draft of 11.5 feet. Every tug is built to American Bureau of Shipping (ABS) Standards.



## **Built to last and easy to operate.**

The ABS “ice-class” hull has more steel thickness and tighter framing in the bow and stern ensuring increased normal and statutory life. It is designed for two-man operation, with bridge control of engine room and deck winch. And, delivers great fuel efficiency with lower maintenance costs.

## **Cuts government and society classifications & certification costs.**

Because of its smaller weight and size, no Loadline Certificate is needed, and only one licensed operator is required. Crew does not need to hold AB and OS ratings, or Merchant Marine Documents. This helps with future crew shortages and increased wages and benefits costs.

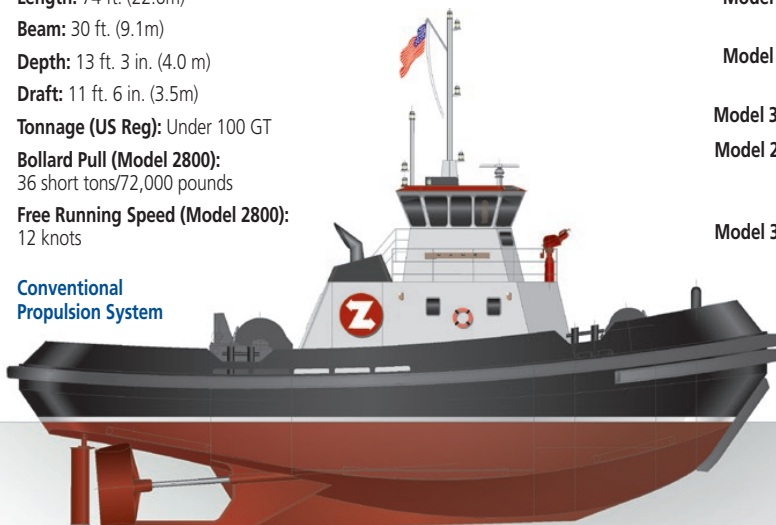
## **Smaller environmental footprint.**

This “green” tug reduces air emissions and other environmental toxins. No ballast water or sewage water is discharged from the tug. Its Cummins propulsion engines meet current U.S. EPA Tier II and EU Stage IIIA emissions regulations and delivers superior fuel economy, durability, and reliability.

# “HANDYSIZE” MULTIPURPOSE TUG SPECIFICATIONS

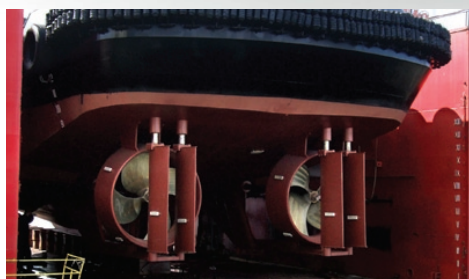
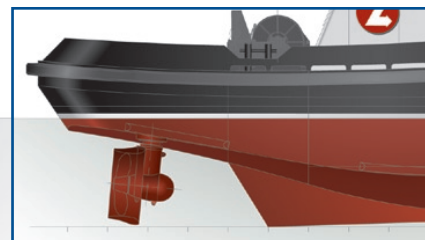
**Length:** 74 ft. (22.6m)  
**Beam:** 30 ft. (9.1m)  
**Depth:** 13 ft. 3 in. (4.0 m)  
**Draft:** 11 ft. 6 in. (3.5m)  
**Tonnage (US Reg):** Under 100 GT  
**Bollard Pull (Model 2800):**  
 36 short tons/72,000 pounds  
**Free Running Speed (Model 2800):**  
 12 knots

**Conventional  
 Propulsion System**



**Model 2800** = Standard HandySize Tug with a 2,800 HP conventional, kort nozzled propulsion system with dual rudders  
**Model 3200** = Standard HandySize Tug with a 3,200 HP conventional, kort nozzled propulsion system with dual rudders  
**Model 3200Z** = Standard HandySize Tug with a 3,200 HP and ASD (Z-Drive) Propulsion System  
**Model 2800F** = Modified HandySize Tug with a 2,800 HP conventional, kort nozzled propulsion system with dual rudders and outfitted with firefighting equipment in accordance NFPA Class “A” Fireboat requirements.  
**Model 3200F** = Modified HandySize Tug with a 3,200 HP conventional, kort nozzled or ASD (Z-Drive) propulsion system with dual rudders and outfitted with firefighting equipment in accordance NFPA Class “A” Fireboat requirements.

**3,200 HP  
 ASD (Z-Drive)  
 Propulsion System  
 (OPTION)**



## MODEL 2800

**Engines:** Two Cummins QSK38, 1400 HP @ 1800 RPM (2,800 HP total) Tier II Certified.

**Gears:** Two Twin Disc MG540 having 5.17:1 ratio with continuous duty rating of 1557 HP.

**Propulsion:** Two 72” diameter x 75” pitch Kaplan-type 4-blade, Rice “Aqualloy” propellers, inside Type 37, stainless steel lined, kort nozzles manufactured by Custom Nozzle Fabricators.

**Steering:** Hydraulic (HPU) steering system manufactured by Gulf Coast Hydraulics, driving a pair of two rudders behind each propeller. Controls include Kobelt a primary Full-follow-up system and a back-up Non-follow-up system.

**Generator Sets:** Two 65 kW Onan/Cummins diesel generator.

### SCANTLINGS:

- Shell:**
- Bottom Plate: Ice Belt, Frame 6, fwd – ½” plate  
 Frame 6 through Frame 14 – 3/8” plate  
 Aft of Frame 14 – ½” plate
  - Bottom Longitudinals: 5” x ½” flatbar
  - Side Plate: Ice Belt, Frame 6, fwd – ½” plate  
 Aft of Frame 6 – 3/8” plate
  - Side Longitudinals: 4” x 3/8” flatbar
  - Sheer Guard: ¾” plate
  - Keel Plate: 1” plate

### Main Deck:

- Plating: 5/16” plate with ¾” plate inserts as necessary
- Deck Longitudinal: 4” x 3/8” flatbar

**Tank Tops:** Plating: 3/8” Plate

### Internal Bulkheads:

- Collision Bulkhead, Frame 2: 3/8” plate, with vertical 4” x 3” x 3/8” stiffeners on 21” centers
- Watertight Bulkheads, elsewhere: 5/16” plate, with vertical 4” x 3” x 3/8” angles on 21” centers

### Deckhouse:

- Plating: Forward Bulkhead – 5/16” plate  
 Side and Back Bulkheads – ¼” plate
- Framing: Forward Bhd – 5” x 3” x 3/8” angle vertical stiffeners and 4” x 3” x ¼” angle elsewhere

### Pilot House:

- Plating: Forward Bulkhead – 5/16” plate  
 Side and Back Bulkheads – ¼” plate
- Framing: 4” x ½” and 3” x 5/16” vertical flatbars

**Air Compressors:** One small air compressor for “shop” service.

**Engine Cooling:** The Main Engines and gears are cooled using Duramax Marine “Duracooler” keel coolers. The Auxiliary Engines are cooled by raw water pumps engine mounted thru heat exchangers mounted to the engines. Cooling water for the AC unit(s) is supplied from the sea chest crossover.

**Oily Water Separator:** One Heli-Sep Model 500, for use with 300 gallon waste oil storage tank.

**Off-ship Fire-fighting (OPTION):** A single monitor, with a nominal capacity of 2,000 gpm, fitted forward for fighting off-ship fires was furnished and installed by the Builder. Sea water for the monitor shall be supplied by a dedicated sea water pump driven by at PTO off one of the diesel generators.

**Aft Towing Winch (OPTION):** The Aft Towing Winch is a Jon-Rie Intertech Series 500, with a capacity of 2000-ft of 1 3/4” diameter wire that produces a line pull of 70,000 lbs., a line speed of 30 FPM and a brake holding force of 265,000 lbs.

**hawser Winch (OPTION):** As an Option, Great Lakes Shipyard offers a Jon-Rie Intertech Series 230, powered using the same HPU as the aft towing winch. The winch has the capacity to spool 450’ of 7” synthetic hawser and will produce a line pull of 28,000 lbs, a line speed of approximately 50 FPM and a brake holding force of 430,000 lbs.

**Crane (OPTION):** As an Option, Great Lakes Shipyard offers an ESI Marine Crane Model T-045M/3S, powered using the same HPU as the aft towing winch.

### Tank Capacities:

- Fuel – 23,369 gal
- Potable Water – 1,855 gal
- Lube Oil – 500 gal
- Ballast – 4480 gal

**Endurance:** Seven to Ten days.

**Crew Requirement:** Two (Licensed Captain, plus one).

**Accommodations:** Three cabins with berthing for five or six.

**MSD system:** Owens Kleen Tank Model B-SS, Type II, Marine Sanitation Device, and USCG/IMO certified with additional 300 gallon sewage holding tank.

### Wheelhouse Electronics:

- Furuno radar small w 4’ Array
- Furuno radar large w 4’ Array
- Color Depth Sounder
- NavTech GPS with Chart Plotter
- Simrad Autopilot
- AIS Unit
- Furuno GPS Receiver
- Furuno Satellite Compass
- Loudhailer with Fwd & Aft Deck & Galley speakers
- Two Icom VHF Radios
- Magnetic Compass meeting USCG requirements w/correction card
- Wind Speed/Direction Indicator & Weather Station
- EPIRB

**Alarm & Monitoring:** Techsol integrated engine room monitoring and alarm system.

**Purpose:** Harbor Assist, Coastal Ocean Towing, Marine Construction.