



# BWMSV 5420

- SHALLOW DRAFT TENDER  
MULTI-SERVICE VESSEL

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**BAY WELDING**  
SERVICES | BAY WELD BOATS

## Main Specifications:

Length Overall:	54 Feet
External Beam:	20 Feet
Hull Type:	Semi-V, Planning Style - Shallow Draft
Dry Draft:	48 Inches
Engine/Propulsion:	Twin Diesel, Shaft - Tunnel, Propellers
Horse Power:	425hp Per Engine
Cruise Speed Range:	9-12 kts.
Fuel Capacity:	1350 gallons, Diesel

- Two Maximum Performance MPH1-20K hydraulic galvanized deck cranes with 6' tall pedestals, knuckle boom, Hydraulic Winch, 20 foot of reach with a 1250# lifting capacity at full reach.
- Four equal sized fish holds that are 260 cubic feet each for a total product capacity of 1040 cubic feet. Salmon in RSW average 55# per cubic foot for a total salmon capacity of 57,200#. Crab is approximately 50% of salmon capacity for a total crab capacity of 28,600#.
- Fish holds to have double hull bottom and side plate with internal framing for a smooth fish hold interior and void space air-gap insulation value.
- Fish holds to have crab elevator system that has a perforated plate in the bottom with rubber "sweepers" on the edges so the crab legs don't get pinched along sides. Center pipe attached to perforated bottom plate for lifting the crab to the surface while the water drains through.
- Built-in sump in each fish hold for suction lines
- Flush mount – bolt down fishhold cover 7'X7'
- Roof top mast with platforms to hold LED lighting, antennas, and speakers.
- Engine room to be in the stern of vessel
- Twin main engine and single generator
- Main engines to have V-drive transmission with tunnel for propeller and rudder
- Heavy duty Skaggs under each tunnel so the boat can sit flat when grounded
- Stern engine room access through Diamond Sea Glaze water tight door
- Removable deck side bulwarks next to fish holds to make for easy loading of product
- 4" high-density black rubber guards down sides of boat.



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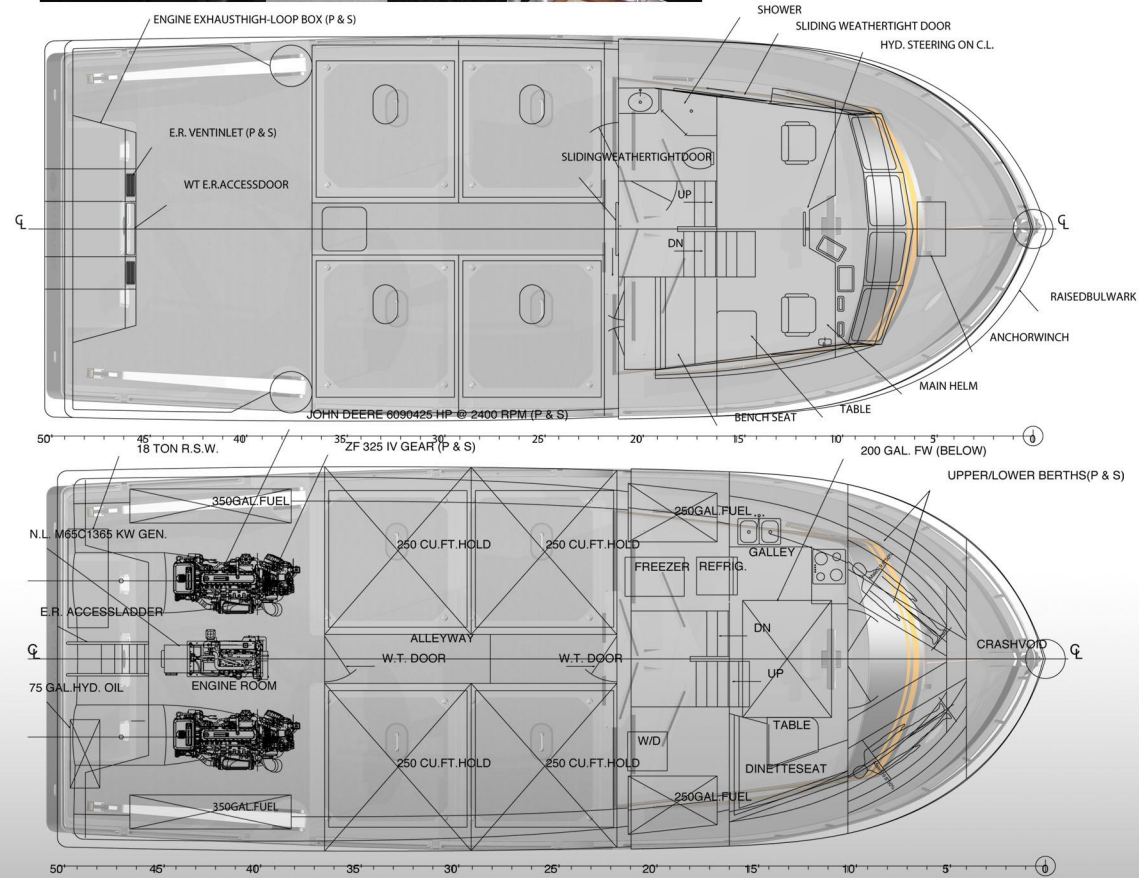
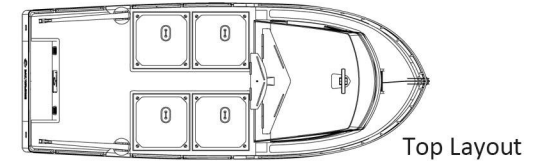


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# Cabin and Interior Features:

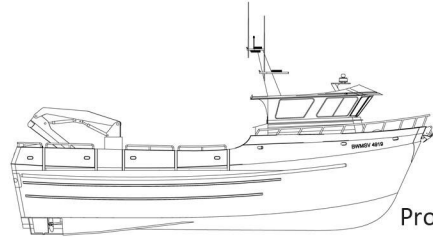
- Forward cabin with a raised pilothouse design and living space on lower level.
- Upper level pilothouse to have port side main helm station, electric panels, navigation electronics, engine control panels, secondary helm station on stbd side, and bench seat along back wall.
- Lower level to have four bunks forward in a V-berth bunk bed style arrangement, a settee which accommodates 4-6, a full galley, a washer and dryer, and a mechanical room with access to an alley way to engine room in stern.
- Main cabin galley to include an electric four burner cooktop/oven unit, double stainless steel sink with hot/cold faucet, microwave oven, storage drawers and cabinets, convenience outlets, and combination refrigerator/freezer
- Cabin exterior doors to be Commercial grade Sea Glaze brand doors with window
- Slider main cabin entrance door on main deck level with split stair access to upper and lower levels.
- Head space located on main deck level on the port side of split-level entry.
- Head to include a stand up shower space, an electric Jabsco full size toilet, and a washbasin sink with faucet.
- Head space to have in interior access door from split-level entry.
- Exterior head door to be a Diamond Sea Glaze watertight door.
- All cabin windows to be commercial grade and manufactured by Diamond Sea Glaze.
- Engine room access alleyway down center of boat in between fish holds. Alleyway to have a Diamond Sea Glaze watertight door on forward and aft ends of alleyway.



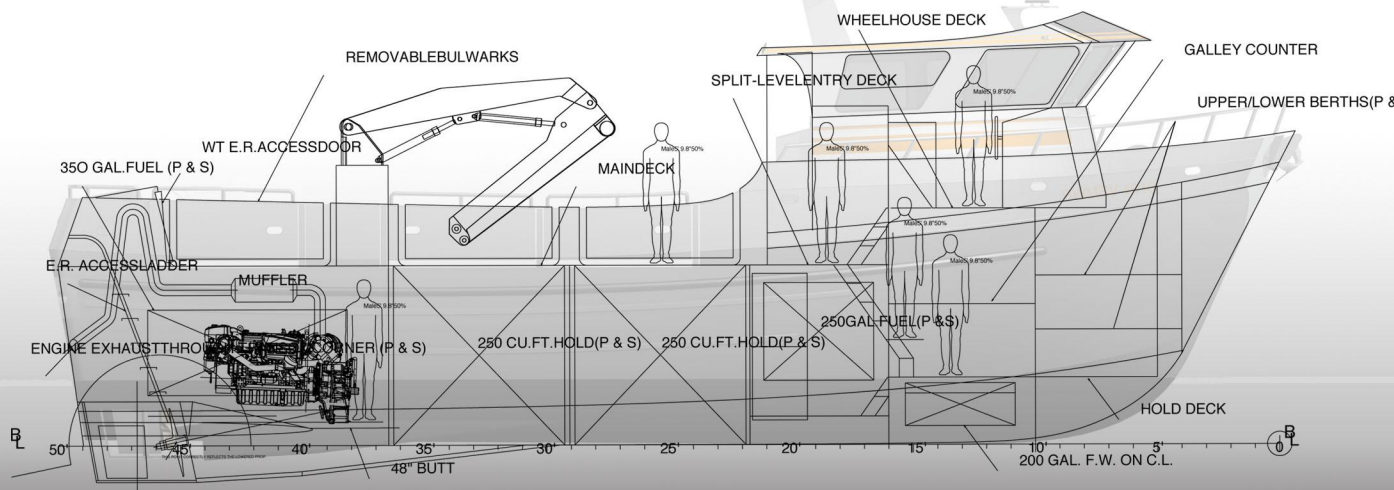
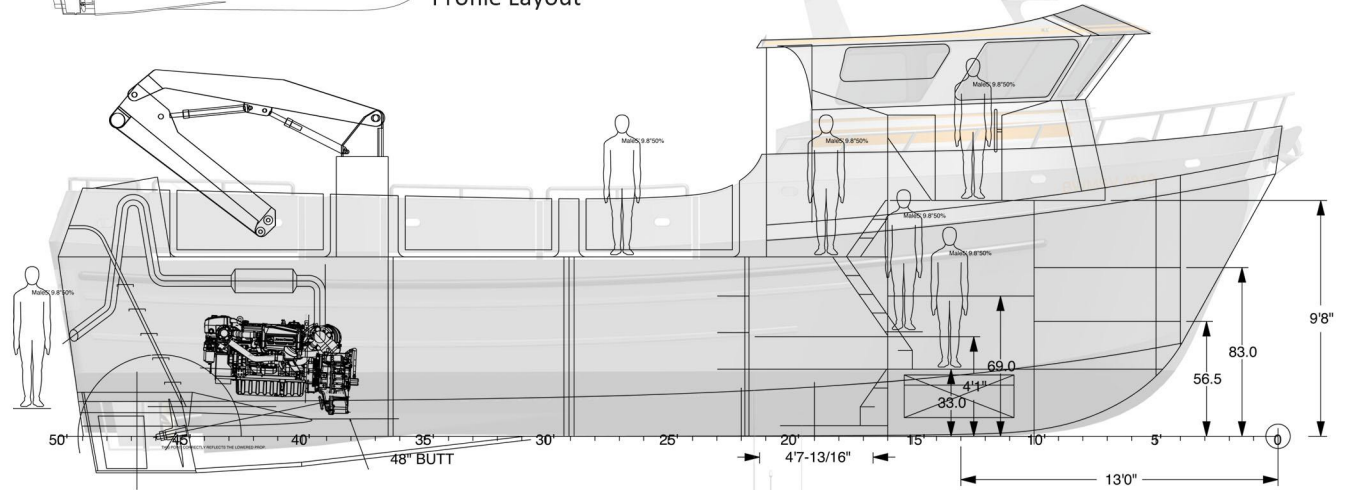


# Propulsion/Engines:

- Engine package to include the following:
  - John Deere 6090 Diesel main engine rated 425 HP at 2400 RPM.
  - Engine keel cooled with SS dry exhaust, muffler, and exhaust wraps
  - Main engine exhaust to exit starboard/port stern corners with a high loop above deck in transom air box
  - Fernstrum keel cooler for each engine
  - Engine main panel LCD displays at main helm in cabin
  - Engine start/stop panels at main and port wheelhouse stations
  - ZF 325-IV marine gear with 2.5:1 reduction and Live C pad PTO. Gear to be electronic shift version.
  - ZF electronic engine control system with two station control heads (port and stbd wheelhouse)
  - Electronic trolling valve controlled by ZF controls
  - Transmission oil cooler
  - Electric engine oil and transmission oil discharge pump on each engine with selector valve and switch (waste oil is pumped out, and new oil pumped in with this system)
- Engine room ceiling to have noise insulating layer of Silver Mylar insulation material fitted to under floor skin
- Hydraulic steering system with HD ram assembly, HD SS tie bar, power steering pump, tank, cooler, helm pump, and solenoid pack for auto pilot
- Two SS rudders with 2.5" rudder posts
- 2.5" SS propeller shaft
- Four blade SS 34" propellers
- PSS dripless propeller shaft seals
- 2 separate jog steering stations
- Stainless steel steering wheel at center helm



Profile Layout



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## Included Features:

- 250 gallon plastic fresh water tank installed in forward mechanical room
- 20 gallon hot water heater run off 120 volt circuit off generator
- 20 gallon aluminum waste water holding tank for head mounted above water line with gravity discharge system
- Jabsco porcelain full size - electric flush - marine toilet with 12v-dc macerator pump
- Two-color vinyl boat name lettering for port and stbd bow with home port, accent stripping and builders logo installed alongside cabin
- Four-burner 120-volt cooktop/oven unit at galley. Cooktop to have adjustable sea rails for pot holders
- Microwave oven unit mounted above galley
- Norcold AC/DC 7 cu ft. refrigerator/freezer
- Built-in coffee pot with pot holder for rough weather
- 8 King electric SS 120-volt cabin heaters with circulation fans and thermostats on each unit.
- Marine 6.3 cu. ft. Chest Freezer AC/DC freezer installed in lower cabin mechanical room
- Compact 120-volt washer and dryer set included and installed in lower cabin mechanical room.



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## Mechanical/Hydraulic/Fuel:

- Four aluminum diesel fuel tanks - approx. 1350 gallons total.
- 12 volt Diesel transfer pump plumbed to pre-fill Racor filters and transfer fuel as needed.
- Fuel tank management valve block for supply and return lines
- Dual Racor 1000 series filters for each main engine
- Dual Racor 900 series filters for generator
- 50 gallon hydraulic tank installed in engine room
- Load sensing hydraulic pump system driven off of marine gear live PTO.
- Eaton 6.0cu pump on each marine gear to operate deck cranes, deck wash, and anchor winch.
- Auxiliary - A pad PTO on each engine for power steering.
- Kinematics hydraulic anchor winch.
- Hydraulic driven 2" pacer pump for deck wash down
- IMS 18 Ton Electric RSW system installed in engine room along fish hold bulkhead on center
- Dual 3" electric circulation / crab pumps.
- Northern Lights M65C13 65 kW 208-volt 3-phase generator in center of engine room with keel cooling and stainless steel dry exhaust system
- Gen set muffler and exhaust wrap - exhaust system exit at port stern corner.
- Fernstrum recessed keel cooler unit included and installed
- Two Maximum Performance MPH1-20K hydraulic galvanized deck cranes with 6' tall pedestals, knuckle boom, Hydraulic Winch, 20 foot of reach with a 1250# lifting capacity at full reach.



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## Electrical Systems:

- Blue Seas Custom 360 12v-dc main panel with voltage and amperage meters and main breaker.
- AC 208 volt 3 phase commercial panel for generator motor loads/RSW/Galley appliances
- 50 amp Shore power inlet for 120 volt system
- 100 amp DC battery charger for automatic charging of DC battery banks
- Seven 8-D batteries split into a 3 bank system
- 5 inch LED round cabin dome lights
- Side mounted LED running lights
- LED anchor and fishing lights mounted on mast pedestal
- 4ea 30" bar LED deck flood lights
- 1ea 6" bar LED fwd. anchor deck flood light
- 2ea 20" bar LED side flood lights
- 4ea 50" bar LED fwd. flood lights
- 8 engine room LED strip lights on ceiling
- 4ea forward mechanical room LED strip lights
- 4ea 12v-dc circulation fans
- 5ea Imtra Coastal series windshield wiper motors
- Electronics system components and installation includes:
  - 2ea Furuno TZT12 12" 3D NavNet LCD TZ touch screen
  - Furuno GP330B GPS receiver with NEMA 0183 and 2000
  - Furuno DFF1 Network sounder black box with Airmar 50/200 dual frequency thru-hull transducer
  - Furuno XN13A/6 Six foot Open Array 72 mile digital radar
  - Furuno DRS12A UHD Radar box
  - Furuno PSU012 Power Supply for radar
  - Furuno NAVPILOT 700 with jog lever.
  - Standard Horizon GSX5000 VHF radio with PA and Hailer
  - ICOM M802-11 150 watt advanced SSB transceiver
  - Ritchie DNB-200 4.5" compass with back light
  - Perko 179 12 inch brass fog bell USCG approved
  - Kahlenberg D-0A Marine Air Horn
  - Standard Horizon VLH3000 30 watt Loud Hailer
  - Furuno FA150 Universal AIS transponder
  - One Fusion CD/DVD player with Blue Tooth compatibility and radio in main cabin. Four speakers in main cabin included. Exterior marine antennae included.
  - 32" LCD TV display installed in downstairs main cabin with input from CD/DVD unit

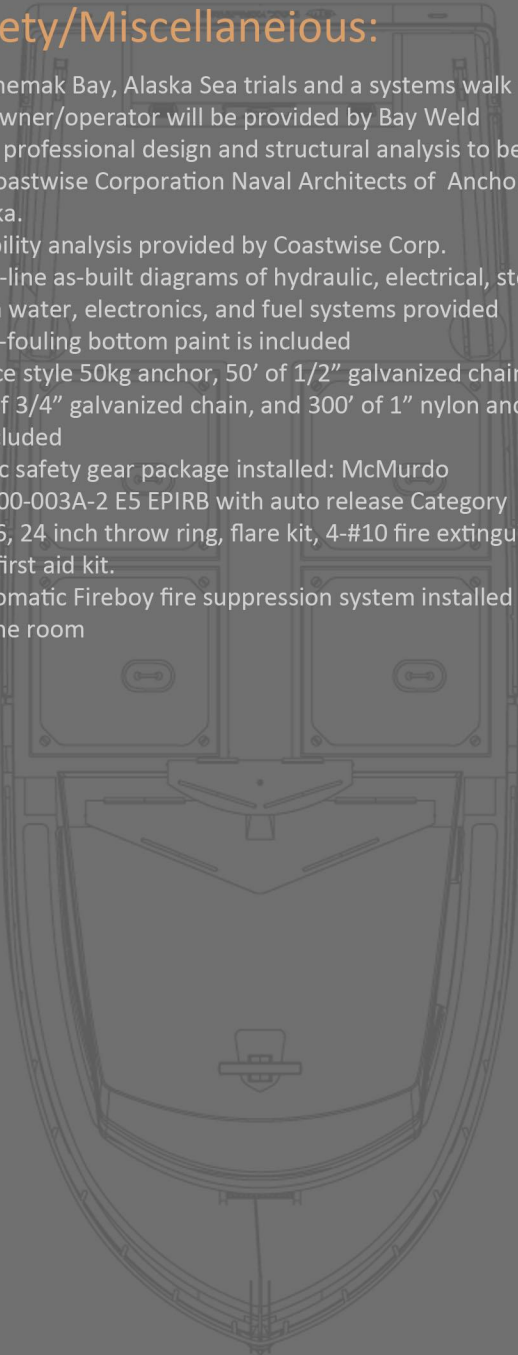


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# Safety/Miscellaneous:

- Kachemak Bay, Alaska Sea trials and a systems walk through for owner/operator will be provided by Bay Weld
- Hull professional design and structural analysis to be done by Coastwise Corporation Naval Architects of Anchorage, Alaska.
- Stability analysis provided by Coastwise Corp.
- One-line as-built diagrams of hydraulic, electrical, steering, fresh water, electronics, and fuel systems provided
- Anti-fouling bottom paint is included
- Bruce style 50kg anchor, 50' of 1/2" galvanized chain, 10' of 3/4" galvanized chain, and 300' of 1" nylon anchor line is included
- Basic safety gear package installed: McMurdo 82-800-003A-2 E5 EPIRB with auto release Category 3 406, 24 inch throw ring, flare kit, 4-#10 fire extinguishers, and first aid kit.
- Automatic Fireboy fire suppression system installed in engine room



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*“We are very pleased with the workmanship and functionality of the T/V King Island. We are impressed by Bay Welding’s attention to detail and appreciate that the vessel was sourced almost entirely in Alaska. The new vessel has been a great addition to our tendering fleet, helping support the resident fishermen of Norton Sound and provide a quality product from our region.”*

- Norton Sound Economic Development Corporation

