

# VACALL™

## All Excavate 811



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811

## SPECIFICATIONS

### GENERAL SPECIFICATIONS

**Drive:** Split shaft PTO with direct drive to blower  
**Silencer:** Outlet silencer based on blower requirements  
**Electrical:** 12 volt CAN bus system with sealed connectors

### VACUUM SYSTEM

**Blower:** Howden-Roots 8x24 with two vacuum reliefs  
**Vacuum:** 3,500 CFM @ 18" Hg (245"H2O)  
185 HP @ 2,250 rpm  
**Blower Airflow:** 4,700 CFM free air  
**Drive:** OMSI air shift transfer case, power frame-mounted, step-up ratio  
**Blower Inlet:** Filter housing with 304 SS screen assembly  
**Cyclone Separator:** Single with drop box clean out  
**Vacuum Relief:** Air operated 4" valve controlled at control panel and handheld pendant

### WATER SYSTEM

**Pump Type:** Hydraulically powered triplex plunger  
**Filter:** In-line suction strainer on pump inlet  
**Water Pump:** 0-25 gpm @ 3,000 psi  
(94.6 LPM @ 206.8 BAR)  
**Excavating Hose Reel:** Hannay spring rewind, 0.5" x 75' capacity, includes 75' of 0.5" high pressure, high temperature hose  
**Standard Handgun, Lance, and Nozzle Kit:** (1) Handgun/lance assembly, (2) extension lances with quick couplers and 1-3 place wedge digging nozzle, 50' handgun hose with quick couplers on each end, 3,000 psi hose shipped loose  
**Drain Valves:** High pressure section, water pump suction line, strainer on water pump inlet, cut-off on water pump inlet line  
**Water Pressure Relief Valve:** Adjustable  
**Air Purge System**  
**Cold Weather Recirculation:** Using Main Water Pump

### DEBRIS TANK

**Volumetric Capacity:** 8 cubic yards  
**Dump Angle:** 42°  
**Construction:** Oval shape, cylindrical sides, wrap-around gussets plus rear mount boom  
**Sides:** .250" thick steel  
**Lifting:** Hydraulic 3-stage telescopic cylinder  
**Debris Body Safety Prop:** Single prop manually operated, located on hoist frame near rear axles  
**Tailgate:** Heavy-duty rear 90° hydraulically opening with dual positive hydraulic locks with reverse-angle wedges  
**Tailgate Safety Prop:** Located outside beside tailgate driver side  
**Carbon Steel Float Ball Cage**  
**Stainless Steel Float Ball Shut-Off**  
**Carbon Steel Splash Shield**  
**Float Level Indicator**  
**Interior and Exterior Powder Coated**  
**6" Decant Port on Rear Door:** 6" brass slide gate valve, 6" Lay Flat Hose, Storage Basket  
**Sludge Pump Port**

### BOOM HOSE

**Hose:** 8" bore x 330" long, single piece rubber hose, boom turret head to end connector  
**Hose Construction:** Smooth bore NR/SBR liner  
**Hydraulic Boom:** Rear mounted  
**Boom Rotation:** 327°

### HYDRAULIC SYSTEM

**Hydraulic Pump:** Pressure-compensated piston pump with ORS fittings  
**Hydraulic Reservoir:** 51 gal max  
**Return Filter:** 5 microns

### OPERATOR CONTROLS

**AllSmartFlow Control Panel:** Enclosed cabinet control box containing: CAN bus boom control joystick recessed for protection. LCD color display with 32 output microprocessor control (expandable), J1939 can communication, increase/decrease engine RPM, tachometer, hour meter, water pressure psi, vacuum Hg, water pump hour meter, blower hour meter, vacuum gauge, low water light  
**Boom Control Joystick:** Recessed for protection  
**Throttle Control:** Increase and decrease RPM  
**Water Pump:** On, off, increase and decrease pressure  
**Blower:** On, off, increase and decrease vacuum  
**Vacuum Relief:** Open and close  
**Electric Implement Controls:** Debris tank raise and lower, rear door open and close, vibrator, and sludge pump  
**Emergency Stop**  
**Electrical Controls and Wiring Harness:** Ip66 sealed exterior, protective cover exceeds Nema 4 rating  
**Transfer Case Shift Controls**  
**Two Channel Camera System:** 7" Swivel Color LCD Monitor (Back Up)

### POWER MODULE

**Vacuum Pump:** Direct drive  
**Hydraulic Level Sight Gauge**  
**Hydraulic Reservoir Shut-Off Valve(s)**  
**Platform and Steps-On Power Frame**  
**Hydraulic Pump:** Single Independent Implement System  
**Transfer Case:** Remote sight glass and fill  
**Standard Shelf**  
**Tube Storage at Power Module**

### WATER TANKS

**Volumetric Capacity:** 1,100 gallons  
**Construction:** High-quality fully welded aluminum  
**Water Tank Fill:** 4" air gap with water tank electronic level indicator on control panel display  
**2-1/2" Y-Strainer on Fill Line**  
**Sight Level Tube on Passenger Side Water Tank**

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## SPECIFICATIONS (cont.)

### CHASSIS

Electric Back Up Alarm  
Factory Mounted Tandem Axle, Fenders  
Mud Flaps Behind Rear Tires  
Rear Dot Under Ride Protection (Bumper)

### LIGHTING

LED D.O.T. Lighting: Stop, tail, turn and back-up  
LED Boom Work Lights

### PACKAGED ITEMS

1/2" Blue Star Raven Nozzle  
8" Vacuum Tubes: Flat flanged style aluminum tubes: 5' (x2), 4' (x2), 3' (x1)  
6" Vacuum Tube: Flat flanged style aluminum tube with rubber hydro-x end: 7' (x1)  
Tube Clamps: 8" (x6), 6" (x1)  
Gaskets: 8" (x6)  
Reducer: 8" X 6" (x1)  
Pendant Remote Control: 50' long with throttle control, boom functions and vacuum relief valve controls

### PACKAGED ITEMS (CONT.)

Fill Hose: 25' X 2 1/2"  
Hydrant Wrench  
Emergency Road Kit  
Fire Extinguisher (5#)

### PAINT

Powder Coat: Subframe, power frame, exhaust silencer, debris tank exterior and interior, air/water separator exterior only

## VACALL ALLEXCAVATE 811 CHASSIS REQUIREMENTS

### Vehicle configuration

- Set forward axle - truck

### General service

- Expected front axle(s) load: 20,000 lb (max weight)
- Expected rear drive axle(s) load: 46,000 lb (max weight)
- Expected gross vehicle weight capacity: 66,000.0 lb (max weight)
- Domiciled, USA 50 states (including California and carb opt-in states)

### Engine

- Cummins L9 370 hp @ 2100 rpm, 2100 gov rpm, 1250 lb-ft @ 1200 rpm

### Engine equipment

- 2010 EPA/CARB/GHG21 configuration (dependent on registration state)
- 2008 CARB emission certification - clean idle (includes 6" x 4" label on left side of hood)
- 12 volt, 160 amp alternator
- Passenger side outboard under step mounted horizontal after-treatment system assembly with passenger side b-pillar mounted vertical tailpipe
- 13 gal diesel exhaust fluid tank (mounted under cab)

### Transmission

- Allison 3000 RDS automatic transmission with side/side PTO provision (minimum)

### Transmission equipment

- PTO mounting, driver side and passenger side of main transmission

### Rear suspension

- Hendrickson RT463 @ 46,000 lb rear suspension
- 54" axle spacing

### Brake system

- Air dryer reservoir mounted (no sideout frame mount)

### Wheelbase & frame

- Frame overhang: 65"+ (1.65 m)
- Calculated effective back of cab to rear suspension c/l (ca): 195.03" (Usable ca 195" minimum)

### Chassis equipment

- Clear frame rails 36" from back of cab inside/outboard/below both frame rails

### Fuel tanks

- 100 gal / 25" diameter fuel tank(s)

## VEHICLE SPECIFICATIONS SUMMARY – FRAME RBM

Wheelbase (545)..... 282" (7,150 mm)

Frame Rails (546) ..... 0.5" x 3.64" x 11.875" (12.7 mm x 92.5 mm x 301.6 mm) steel

120KSI (546)

Yield Strength (psi)..... 120,000

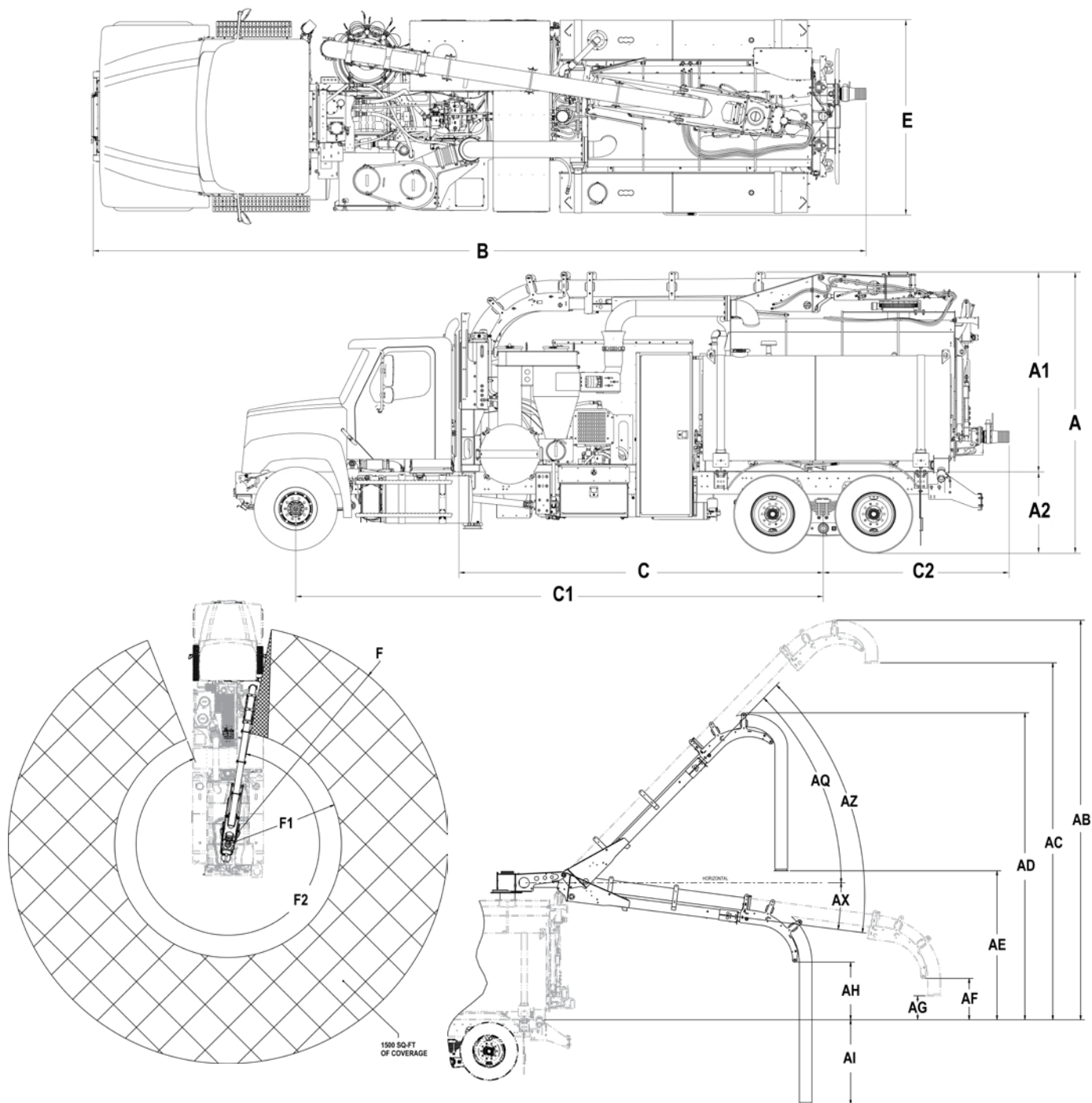
Section Modulus (per rail) (cu in)..... 26.26

RBM (per rail) (lbf-in) ..... 3,204,000

Inner Frame Reinforcement (547) ..... 0.25" (6.35 mm) c-channel inner frame reinforcement

RBM (per rail) (lbf-in) ..... 1,205,000

Outer Frame Reinforcement (548) ..... No outer frame reinforcement



## DIMENSIONS

<b>A</b>	~12'6" (3.8m)	Overall Stored Height	<b>AB</b>	~23'10" (7.26m)	Boom Max Working Height Extended
<b>A1</b>	~8'11" (2.7m)	Module Stored Height	<b>AC</b>	~21'4" (6.5m)	Hose Max Height Extended
<b>A2</b>	CHASSIS VARIABLE	Chassis Frame Height	<b>AD</b>	~18'4" (5.58m)	Boom Working Height Retracted
<b>B</b>	~34'5" (10.49m)	Overall Length	<b>AE</b>	~8'11" (2.71m)	Hose Height Retracted
<b>C</b>	~16'3" (4.93m)	Module Length Front	<b>AF</b>	~2'6" (0.76m)	Boom Min Height Extended
<b>C1</b>	~23'6" (7.16m)	Wheelbase	<b>AG</b>	~1'5" (0.43m)	Hose Min Height Extended
<b>C2</b>	~8'3" (2.5m)	Module Length Rear	<b>AH</b>	~3'5" (1.04m)	Boom Min Height Retracted
<b>E</b>	~8'8½" (2.64m)	Overall Width	<b>AI</b>	~5'1" (1.54m)	Hose Min Height Retracted
<b>F</b>	~26'8" (8.12m)	Boom Max Reach	<b>AQ</b>	46°	Boom Max Up Angle
<b>F1</b>	~13'9" (4.19m)	Boom Min Reach	<b>AZ</b>	53°	Boom Total Angle
<b>F2</b>	237°	Boom Rotation	<b>AX</b>	7°	Boom Mad Down Angle

**NOTE:** All dimensions shown are applicable to Freightliner M2-106 Chassis only.  
\* Rear Tandem Axle Required.

## OPTIONS

**Belly Pack Wireless Pendant:** Controls all boom functions, engine RPM, vacuum relief, emergency stop, and water pump speed. Other Functions Also Available.

**Handheld Wireless Remote**

**Sludge Pump**

**4" Brass Slide Gate Valve for Decant**

**Full Load Indicator**

**Electric Debris Body Vibrator**

**Anti-Siphon Fill**

**Work Lights**

**Strobe Lights**

**Toolboxes**

**Vacuum Tube Racks**

**Supreme Finished Galvanized Debris Body**

**Supreme Finished Galvanized Air Water Separator**

**Supreme Finished Galvanized Tailgate**

**Camlock Fill Adapter**

**SS Float Ball Cage**

**Blaster Valve**

**SS Hinged Decant Screens**

**Standpipes - Various sizes**

**Anti-Splash Valve**

**Air Compressor**

**Anti-Freeze Injection**

**Dual Reels**

**Hydraulic Rewind Reel**

**2" Drain Valve on Air Water Separator**

**2" Drain Valve on Silencer**

**6" Air Operated Vacuum Relief**

**Tube in Tube Boom Hose, Steel Elbow or Rubber Elbow**

**Lube Chart**

**Blower Temp Gauge**

**Blower Temp Gauge Connection to Vac Relief**

**Can/USB Cable**

**Debris Tank High Level Alarms and Light**

**Debris Tank High Level Alarms and Light Hooked to Vac Relief**

**Camera System**

**Power Pack with Emergency Hydraulics**

**Remote Emergency Stop**

**Tool Circuit**

**Low Water Light and Alarm**

**Override for Alarms**

**Spotlights**

**First Aid Kit**

**Nozzles**

**Handguns Pistol and Straight Grip**

**Vacuum Tubes Various Sizes and Connection Ends**



## AIR EXCAVATION SYSTEM (ALLEXCAVATE 2 OPTION)



**Air hose Reel:** Spring Rewind, 75' of 1" Air Hose

**Air Compressor:** Low Pressure Mode: Up To 110 psi at 185 CFM

**High Pressure Mode:** Up To 150 psi at 150 CFM



## COLD WEATHER PACKAGE OPTION

**Boiler:** Diesel fired 470,000 Btu

**Insulated Aluminum Cabinets**

**Cabinet Heater**

**External Waterlines:** Insulated with heat trace

**Optional Boilers:**

- 705,000 BTU Boiler
- 940,000 BTU Boiler

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