



MAC LTT, Inc
1400 Fairchild Ave
Kent, Ohio 44240

MAC LTT Manufacturing, Inc
1430 US Highway 87 E
Billings, MT 59101

MAC LTT Stainless Division
2253 Enterprise Drive
Mt Pleasant, MI 48858

SPECIFICATIONS

MAC LTT Model: **ATE-950-4A-2-406**

9,500 Gallon DOT406
Double Taper
3000//1500//2000//3000
Tandem Axle

SALES ORDER NUMBER: **TBD**

A General

| | | |
|----|--------------------------------|---|
| 1 | Trailer Type | Aluminum |
| 2 | Code | DOT-406 |
| 3 | Overall Length in Feet | 45 |
| 4 | Shape | <i>Double Taper Elliptical with Slope to Center</i> |
| 5 | Operating Pressure | 3.3 PSI with 5 PSI Test Pressure |
| 6 | Max. Product Density | 7.5 lbs./ U.S. Gallon |
| 7 | Max. Loading Temp. | 150° F max. Operating Temperature |
| 8 | Product(s) | Refined Fuels, Gasoline, Diesel, and Etc. |
| 9 | Warranty | Standard Three (3) Year Limited Warranty |
| 10 | Fifth Wheel Height | Standard 49" |
| 11 | Additional Regulation | None-Optional |
| 12 | Wheelbase | Engineering to Design to Optimize Payload |
| 13 | Road Design Application | Designed for on-road use only |

B Barrel

| | | |
|----|-----------------------|---|
| 1 | Compartment(s) | Four (4) compartments with double bulkhead between compartments #3 & #4 3000//1500/2000//3000 |
| 2 | Capacity | 9,200 Gallons +3% Overage in Each Compartment with 60 Gallon Minimum Overage. |
| 3 | Baffles | 0.25" Load Bearing & 0.19" Non-Load Bearing 5454 OT Aluminum with large center hole, 3" holes at 9, 12, & 3 o'clock positions and Bottom Drain Tunnel |
| 4 | Shell | Two Section Aluminum 5454-H32 Barrel 0.205" Bottom, 0.179" Top and Sides |
| 4a | Shell Finish | Mechanical Buffed Sides with Enhanced Finished Top and Bottom |
| 5 | End Heads | 0.249" Nominal 5454 0 Temper AL Flanged & Dished Heads |
| 5a | Head Finish | Polished Finish (Standard) |
| 6 | Bulkheads | Double 0.19" or Single 0.25" Bulkheads Nominal 5454 AL Flanged & Dished Heads-Mill Finish |
| 7 | Manway(s) | One (1) 16" Diameter with 10" offset fill manhole per compartment. |
| 8 | Weld Finish | W-0 Inside and Outside - Free of Weld Spatter and Weld Smoke |
| 11 | Insulation | None-Optional |
| 12 | Jacketing | None-Optional |
| 13 | Underlayment | N/A |
| 14 | Thermometer | None-Optional |

C Structure

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|---|----------------------------|--|
| 1 | Reinforcing Rings | None - Smooth Exterior with Internal Baffles |
| 2 | Frame | Extruded Aluminum Full Length Frame Design |
| 3 | Barrel Supports | Aluminum Outriggers and Crossmembers at Load Bearing Areas |
| 4 | Overturn Protection | DOT-406 Aluminum "V" Extrusion on Top Both Curbside and Roadside. Curbside Rail Doubles for Vapor. Dam Plates at Each End with 1/2" Coupler and Plug |
| 5 | Overturn Drain(s) | 3" Walkway drain through tank at Rear |

| D Running Gear | | |
|---------------------------|------------------------------|--|
| 1 | Suspension | Hendrickson Intraxx AANT23K, 23,000 lb. |
| 1a | Axle Spacing (inches) | 49" |
| 1b | ZMD Ride Bags | None-Optional |
| 2 | Axles | 71 1/2" Track with 5.75" diameter; HP Spindles with Same Inner and Outer Bearings. |
| 3 | Number of Axles | Two (2) |
| 4 | Lift Axle(s) | None-Optional |
| 4a | Ride Height Control | Standard Hendrickson Height Control Valve |
| 5 | Hub(s) | Dura-Light 10 Stud Hub Piloted, 11 1/4" B.H.C. |
| 6 | Drum(s) | Cast 16 1/2" x 7", 10-Stud Outboard Mount Drums |
| 7 | Dump Valve | Push/Pull Valve with Auto Reset mounted in Control Cabinet |
| 8 | Brakes/Brake Chambers | 23,000# Rating with S-Cam 16 1/2" x 7", 2.5" stroke, 3030 Chambers, and Non-Asbestos Linings |
| 9 | Dust Shields | None-Optional |
| 10 | Slack Adjusters | Automatic |
| 11 | Warranty | Hendrickson Extended Life System "HXL5" with Federal Mogul Hub Seals |
| 12 | Gladhands | Phillips or Equivalent |
| 13 | ABS | Wabco 4S/2M System Wired to Blue Wire with Rear Malfunction Warning Light |
| 14 | Roll Stability System | ABS with Roll Stability System |
| 14a | Diagnostic Cable | None-Optional |
| 15 | Air System | Aluminum Air Tanks |
| 16 | Tank Drain/Dryer | Petcock Valve at bottom of each Tank |
| 17 | Suspension Frame | Aluminum |
| 18 | Bumper | Aluminum Extruded |
| 19 | Bumper Overlay | Full width Aluminum Buffed Cosmetic Bumper Overlay. |
| 20 | Underride Protection | None when DOT 12" Wheels Back Exemption Applies |
| 21 | Rear Closeout | Rear Tank Frame Closeout Panel |
| E Tires/Wheels | | |
| 1 | Wheels | Accuride Accu-Lite with Extra Polish |
| 2 | Tires | Goodyear Marathon RSS 11R22.5 16 Ply |
| 3 | Number of Tires | Eight (8) |
| 4 | Tire Inflation System | None-Optional |
| 5 | Hubodometer | None-Optional |
| 6 | Load Gauge | None-Optional |
| F Fenders | | |
| 1 | Fenders-Front | Roadside Aluminum Contour Fender. Hose Tray on Curbside Doubles as Fender |
| 1a | Closure Plate | None-Optional |
| 2 | Fenders-Rear | Roadside Aluminum Contour Fender. Hose Tray on Curbside Doubles as Fender. |
| 3 | Mudflaps | MAC LTT Mudflaps on Rear of Fenders and Front Curbside of Rear Tires |
| 3a | Anti-Sail | Standard MAC LTT Fabricated Anti-Sails installed where necessary |
| 4 | Spray Guard | None-Optional |
| G Landing Gear | | |
| 1 | Landing Gear | Jost AX150 Alumilight Landing Gear |
| 2 | Crank Location | Roadside |
| H Upper Fifth Wheel | | |
| 1 | King Pin Plate | 5/16" Upper Plate with Hubbed Kingpin. |
| 2 | Pick-Up-Plate | Aluminum Pick-Up-Plate Installed if necessary |
| I Ladder/Platform/Walkway | | |
| 1 | Ladder(s) | Front Bolt-On Aluminum at Center of Head. Rails to have Rolled Radius at Top of Ladder and Top Deck plate Step |
| 2 | Safety Hand Rails | None-Optional |
| 3 | Top Walkway | Non-Skid Tape Between Top Vapor Rails |
| 4 | Fall Protection | None-Optional |
| J Cabinet(s) & Components | | |
| 1 | Tool Cabinet(s) | One (1) Aluminum Cabinet, 48" Wide x 30" High x 27" Deep with Two Aluminum Side Hinged Doors. Mounted curbside forward of suspension. *Install MAC preferred Shelving and Partitions for Petroleum Units |
| 2 | EVO Cabinet(s) | One (1) 30" High Single Door Box with Overfill System and Emergency Valve Controls mounted at Front flush with top of Curbside Equipment Cabinet. |

| K Hose Carrier(s) | | |
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| 1 | Hose Carrier(s) | One (1) 3.5" x 22"W x Full Length Aluminum Extruded Tray functions as Curbside fenders. Includes drain at rear and tarp straps to retain hoses. |
| 2 | Trough Cover(s) | None-Optional |
| 3 | Gauge Stick | 16 Foot Gauge Stick and Holder on Curbside at Rear with Tension Pin at Front |
| L Venting & Vapor Recovery System | | |
| 1 | Relief Vent(s) | One (1) 10" Pressure/Vacuum Relief Valve with Set Pressure at 3.63 PSI Installed in Each Manhole Cover. One (1) BETTS #3686-AL Vent in the Vapor Line Under the Belly of the Tank. |
| 3 | Discharge Vent | Inward opening Sequential Vent with Viton seals in each manhole cover. |
| 4 | Recovery Piping | Vents connected to nipples in curbside flashing rail with 3½" I.D. hose. Internal Vapor Pipe Through Tank with connections at the following locations: (1) 4" outlet Curbside 15" to rear of last discharge valves (1) 4" outlet Curbside 15" forward of discharge valves (1) 4" outlet to extreme rear facing Curbside sloped down 15 degree |
| 5 | Adapter & Cap | Vapor outlet(s) equipped with 4" flanged poppeted vapor adapter & 4" orange cap. |
| 6 | Vapor Drain | None-Optional |
| N Valving/Piping/Hose | | |
| 1 | Outlet(s) | One (1) 4" Aluminum Drain Pocket at Bottom each compartment |
| 2 | Splash Deflector | Bolt-on Splash Deflector above each Emergency Valve |
| 3 | Extra Drain Troughs | None-Optional |
| 4 | Equipment Warranty | 5 Year Component Warranty with either Betts/Dixon-Bayco SuperTanker or Civacon System V |
| 5 | Discharge Valve(s) | Elbow or Straight Air Operated Emergency Valves with Flanged Outlet and AL Body |
| 6 | Discharge Controls | Installed in EVO Cabinet with Air Tank Pressure Gauge |
| 7 | Emergency Valve Closure | Emergency Closure located at Front Head Roadside |
| 8 | Piping | 4" Sch 10 Aluminum discharge piping with formed long radius sweeps from Emergency Valves to Curbside of tank, per API standards. |
| 9 | Manifold | None-Optional |
| 10 | Front Pump-off Line | None-Optional |
| 11 | Outlet Valve(s) | API Valves with Aluminum Handle and Viton seals per compartment. |
| 12 | Sight Glass | Sight Bubble on API Valves |
| 13 | Adapter(s)/Cap(s) | 4" Aluminum Male Gravity Drop Adapter with 4" Aluminum Dust Cap |
| 14 | Secondary Discharge(s) | None-Optional |
| 15 | Security Seal Provisions | None-Optional |
| 16 | Product Indicators | 8-sided commodity tags on bracket over each API valve with Compartment Capacity. |
| 17 | Flanged Gaskets | Cork-N-Buna Gaskets on all flanged connections. |
| 18 | Grooved Gaskets | Baylast or Equivalent Gaskets used on all Grooved Connections |
| 21 | Brake Interlock Valve(s) | One (1) Aluminum Pipe Style Interlock Bar Installed Over Bottom Loading Adapters and Extended to Vapor Outlet(s) at Discharge with (1) Brake Interlock Valve. One (1) Brake Interlock Valve Mounted on Each Vapor Outlet not within API Bar. |
| O Pump | | |
| 1 | Pump | None-Optional |
| 2 | Pump Piping | None-Optional |
| 3 | Hydraulic Lines | None-Optional |
| 4 | Flow Control | None-Optional |
| 5 | Platform | None-Optional |

| P Capacity Controls | | |
|------------------------------------|------------------------------------|--|
| 1 | Overfill System | Overfill System with a Top Probe in each manhole |
| 2 | Sockets | Dual Optic and Thermistor sockets with vinyl caps in Curbside Control Cabinet |
| 3 | Top Sensor Settings | Top sensors set to provide a 60 gallon minimum vapor space in each compartment. |
| 4 | Bottom Retain | None-Optional |
| 5 | Overfill Operation | Pressure switch to allow permit when all vapor vents are open |
| 6 | Identification Module | Installed in Dual Socket Assembly |
| 7 | Static Studs | Two (2) Brass Studs on 1-3/16" centers installed at Landing Gear on Curbside |
| 8 | Ground Bolt/Ball | Ground Wire Installed in Each Socket Assembly |
| Q Wiring | | |
| 1 | Nose Box | Nose Box with J560 7-Way Plug and Circuit Breakers Located Low Roadside at Front |
| 2 | Light System | Truck-Lite LED Junction Box Lighting System with Front Markers, Combination Side Center Turn/Marker Lights, and Three (3) Upper Clearance/Stop |
| 2a | End Dam Turn Lights | None-Optional |
| 3 | Lamp Mounting | Grommet Mounted |
| 4 | Light Boxes | Two (2) Aluminum Light Boxes on the Rear of the Trailer with Two (2) Red Stop/Marker Lamps and One (1) Amber Turn with Rear Side Marker Lights. |
| 5 | Wide-Turn Light(s) | None-Optional |
| 6 | Work Light(s) | Two (2) Grote LED work lamp, Mounted at Curbside Discharge Area with switch in Cabinet. MAC Extreme LED Lighting Assembly to Illuminate Discharge Valves |
| 6a | Work Light(s) Operator | All work lights operated by switch in EVO Cabinet |
| 7 | Cabinet Light(s) | Install One (1) LED Strip Light in each Cabinet |
| 8 | Backup Lights | None-Optional |
| 9 | Backup Alarm | None-Optional |
| 10 | Extra Light(s) | None-Optional |
| 11 | Closeout Light Panels | None-Optional |
| R T.A.L.K- Total Area Lighting Kit | | |
| 1 | T.A.L.K- SAFETY ARMS | No |
| 2 | T.A.L.K- INTERLOCK BAR | Yes |
| 3 | T.A.L.K- LIGHTED HOSE GUARD | No |
| 4 | T.A.L.K- LIGHTED REAR HEAD | No |
| 5 | T.A.L.K- LIGHTED LADDER | No |
| 6 | T.A.L.K- Complete System | No |
| S Paint/Decals | | |
| 1 | Corrosion Resistance | Electrolysis barrier between all dissimilar metals. |
| 2 | Conspicuity | DOT 3M Tape per N.H.T.S.A. Requirements. |
| 3 | Decals | Standard Safety/DOT-406 Warning and Safety Decals |
| 4 | Customer Decals | None-Optional |
| 5 | Emergency Drain Decals | Four (4) 3" diameter round DOT decals, (1) curbside and (1) roadside on horizontal centerline on each end head. |
| 6 | MAC Logo | Standard MAC Logo Placards on Vapor Rails and Rear Bumper |
| 7 | Pin Striping | Black or Selected from Color Options |

T Other/Options

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|----|----------------------------------|--|
| 1 | Document Holder | Document Holder installed on Roadside, near landing gear frame. |
| 2 | Static Cable | 1/8" Stainless Steel Static Cables, Double Looped, One (1) Each Compartment. |
| 3 | Placards | Four (4) Aluminum Slide-in Placard Holders. One (1) per side |
| 4 | Safety Cone/Bucket Holder | Dual Safety Cone and Bucket Holder mounted near Discharge Area |
| 5 | Fire Extinguisher | None-Optional |
| 12 | Calibration | Theoretical Calibration Chart - 1/4" Increments |
| 14 | Bicycle Guard | None-Optional |
| 17 | Standard Inspections | Initial Annual DOT Inspection, EPA Method 27, External Visual, Internal Visual, Pressure, and Leakage Tests. |
| 18 | Additional Inspections | None-Optional |
| 20 | Backup Camera | None-Optional |
| 21 | Approvals | 3D Model and Design Review available upon Customer Request |