

**36.500 LTR. ALUMINUM ROAD SEMI -TRAILER TANKER****GENERAL DATA:**

Design and construction of type approved complete unit semi-trailer tanker in according to ADR regulations and , (FL) type, with flash point less than 60° C.

**TRACTOR HEAD: (ACCORDING TO CUSTOMER IT)**

BMC 4X2 Tractor for 3-axes tractor head of category N3, subjected to ISO1726. Combination of tractive unit and semi-trailer fulfill ADR requirements with combination lateral stability according to ADR requirements and ECE111

**SEMI-TRAILER DATA TYPE APPROVED:**

|                                |   |
|--------------------------------|---|
| Category                       | : O4, trailers with a maximum mass exceeding 11 ton |
| Type / Model                   | : TNSN – ATT36A / 2026                              |
| Volume                         | : 36,500 Liter (Net Capacity)                       |
| Compartment                    | : 5 (Five)  |
| Manufacturer of tank & chassis | : TANSAN TANKER                                     |
| Country of origin              | : TÜRKİYE   |
| Year of production             | : 2026 / Brand New Construction.                    |

**LOADS DISTRIBUTION ON AXLES COMBINATION (WEIGHTS):**

|   |           |        |          |
|---|-----------|--------|----------|
| Payload (Max. Density to be considered is 0.85 t/m <sup>3</sup> ) : | Approx.   | 35,500 | kg.      |
| Semi-Trailer dead weight :  | Approx.   | 5,400  | kg. ±% 2 |
| Loads on fifth wheel :  | Approx.   | 11,000 | kg.      |
| Loads on running axles :  | Approx.   | 27,000 | kg.      |
| Head truck weight :   | Approx.   | 7,300  | kg.      |
| Total combination weight :  | Ayuyprox. | 42,000 | kg.      |

**GENERAL ARRANGEMENTS & DIMENSIONS: ( According to Technical Drwaing)**

|                          |           |                |        |
|--------------------------|-----------|----------------|--------|
| Semitrailer Total Length | : Approx. | 11,000 mm      | ±20mm. |
| Total Width              | : Approx. | 2,550 mm       | ±20mm. |
| Total high               | : Approx. | 3,500 mm       | ±20mm. |
| 5th Wheel Height         | : Approx. | 1,250 mm       | ±20mm. |
| King-Pin Location        | : Approx. | 1,200-1,250 mm | ±20mm. |
| Total Combination Length | : Approx. | 16,320 mm      | ±20mm. |

**(TANK SPECIFICATION) According to ADR ):**

ACCORDING TO EN13094 ADR CERTIFICATE (TSE)

**TANK DATA:****Tank Construction & Design**

According to EN 13094, 2020, Tanks for the transport of dangerous goods, aluminum tanks with a working pressure not exceeding 0.5 bars – Design & Construction, as per ADR/Class 3

**Tank Testing & inspection**

According to EN13094, 2020, Tanks for transport of dangerous goods- Testing, inspection and marking of Aluminum tanks, as per ADR, calculation reports, detailed design drawings including workshop drawings, will be approved & stamped from international TSE third-party company

ALL (FL) type TNSN products, constructed and tested under supervision of independent international third-party company (TSE)

**Net Capacity** : Volume 36.500 liter

**Compartment** : (5) sealed compartments.

Tank construction, design, thickness, baffles, manholes, anti-surge baffles, reinforcements, fixation and all other related components comply with ADR-Ch 6.8 regulations and all related marginal for flammable liquids (Gasoline, kerosene, Jet fuel and Gas oil), all will be compatible with the requirements of FL group with flash point less than 60° C.

**TANK SHAPE:**

The tank shape is **CONICAL CYLINDRICAL**, designed and calculated according to total carrying capacity and to resist overall stability roll over test which is very important in design rules as per ADR regulation.

**Construction**

1 pieces with suitable size to provide lower center of gravity, smaller overall height and maximum stability.

**Tank shell, Front end, & Rear end**

Made out from Aluminum Alloy 5182 / H111 or equivalent, min 5.1 mm thick for the tank shell, **6mm** for the front and the rear heads.

**Partitions, Surge plates & Saddles**

Fully welded flanged around, made out from quality Aluminum Alloy 5182 / H111 or equivalent, min. 6 mm thick reinforced with special profile 3 mm thick designed to absorb dynamic stresses. All are mounted not less than 900 mm and not more than 1750 mm, between each other according to EN13094, suitable and calculated built-up saddles sealed welded to the tank shell & main chassis frame. All saddles, external reinforcements, members ... etc. welded to the shell will be completely welded around to avoid any local corrosion.

## **ACCESSORIES AND FITTINGS:**

### **MANHOLES:**

5 no's of type approved manhole of Ø20" diameter for each compartment, with upper filling suitable port of Ø10" diameter according to ADR with suitable locking mechanism to prevent spillage during shocks or accidents and over-turning, with attachments of over fill sensor and pressure vacuum vent valve which needed to control proper acting of the manhole, and well tightening method to protect overflow spillage will be included.

Roll bars protection welded to the top of tank to with stand 4 or 5 times the forces of rollover to protect the manhole from any damages, or leakage in case of rollover.

### **BOTTOM LOADING SYSTEM:**

Type approved ( NEIHUSER / GERMANY) pneumatic bottom loading system

Overfilling protection system is "fail safe" type approved.

Complete bottom loading system will be on the right-hand side of vehicle.

5 X Optical Pneumatic Sensor Combined working N17LO (Neihuser)

5 X 4" Bottom valve pneumatic operated (Neihuser)

1 X 4" Vapour Recovery Valve (in installation box)

5 X 3" Vapour Valve on menhole cover

1 X 3" Atmospheric Vapour Valve on walking platform

5 X 0.5 Bar Ventile Valve inside of menhole cover

### **HOSES / HOSE CARRIERS:**

1 X (Ø3") diameter type approved delivery hoses 6m. Long with quick couplings (Evertite male and female couplings), to be stored on 2 discharge hose demountable housings 6.1m. Long, above the mudguards. (One on each side).

### **HOSE / HOSES REEL**

1 " OR 1,5 " dia x 15 meters delivery D16 type fuel Discharge hose suitable for fuel derivatives.

Drum-type, explosion-proof, electric or pneumatic automatic winding aluminum hose reel. Manual winding is also available.

### **WALKWAY:**

Open mesh walkway (non-slippery) with foldable hand rail on the top of the tank with one access ladder at the rear of the tank. Left side railing manually operated gas piston

### **VAPOR RECOVERY SYSTEM :**

Full type approved, vapor recovery system for both operating system with seamless aluminum alloy pipe, schedule 10, DN 80 through the tank to right hand side of vehicle, located in armature box with 4" male cam lock coupling.

### **DISCHARGE FITTINGS & VALVES :**

At the lowest point of compartment two pneumatic bottom valve with filling / discharge pipe, DN 100 leading into armature box on right hand side of the vehicle with 4" dry coupling according to API , with sight glass and mechanical dry coupler.

Via bottom loading system with the 876 Gravity Coupler optimizes the connection between 4" API Adaptors and 3" or 4" hose connections, ensuring safe and fast unloading. The 876 has been designed with an over center CAM for easy connection

**SUCTION LINE** ... 3 " Ball valve with dust cap

**PRESSURE LINE** .... 2,5" Ball Valve with dust cap

### **EMMERGENCY CONTROL UNIT :**

Three (3) emergencies shut off switch are mounted as follows:

1 in armature box

1 at front left side of trailer

1 at rear right side of trailer

**ARMATURE BOX:** One on right hand side mounted, with discharge outlets. It is equipped with bottom loading connections, discharge pipes, air control system, and vapor recovery couplings

**SEMI-TRAILER BUILT-UP CHASSIS MAIN FRAME:**

Heavy duty Aluminum Alloy with min. tensile strength of reinforced with air suspension system three single wheel axles. Welded frame construction, consisting of built-up Box Type - beams and sectional cross members with side under run guard 50-mm clearance between the end of tank and rear bumper, two recoveries heavy duty hooks at the rear of the chassis one rear anti-spray fender on it width.

Chassis framework consists of approved quality Aluminum Alloy (**Special box type mold Chassis Profile**)  
The beams are strongly connected with the cross members supporting the suspension system and the kingpin upper coupler

**KING PIN TYPE APPROVED:**

Size & Brand & Size : 2", bolted type SAF (GERMANY)  
D rating value : 152 KN.  
Cycles : Min. 2 million cycles  
King pin skid plate : The kingpin skid plate will be 10 mm thickness of ST 52-3

**LANDING LEGS TYPE APPROVED:**

Brand : SAF (GERMANY)  
Type : Approved Telescopic compensating foot "S" type suitable for air suspension system.  
Operation : Mechanical operated with two speeds  
Min. lifting capacity : 25 ton Min. Static  
capacity : 50 ton

**TYPE APPROVED BRAKE SYSTEM:**

Type approved brake system and its components to match the braking systems of tractive unit made by WABCO / GERMAN ORIGIN.

Two line full air brakes with 80, & 60 liter Air tanks, one as service line and the other for emergency line, diaphragm type air chambers, manual load proportioning valve, EBS sensor fit on two axles, palm coupling for connection to the tractor.

Load controlled two-line air brake system according to EC-norm RR EC 71/320, with automatic load sensing valve and hand brake acting on two axles, incl. EBS, type: 2S/2M. EBS standard connection, ISO 7638. – 2x7pin , 1x15 Pin Socket

**TYERS & WHEEL RIMS:**

Units : 6 +1 (Aluminum) complete spare tires included  
Size : 385/65 R 22.5  
Brand : STOCK - mark approved  
Application : On- roads pattern.  
Wheel rim size : 11.75x 22.5" Suitable for single tyre 385/65 R22.5  
Wheel rim Brand : Aluminum Wheel rims (Mill Finish)

**RUNNING GEAR AND AXLES:**

Heavy-duty type approved set comprising of: Brand : SAF GERMANY  
Axles number : 3 No's  
Axle's capacity : 9,000 kg / Axle  
Suspension : Air Suspension modules  
Axle-Lift facility : One suspension module fitted with axle-lift facility.  
ABS Sensor : Equipped with 2 axles.  
Brake Disk : Brake caliper mounted 20 degree in driving direction  
Max. Overall width : 2460mm.

**ELECTRICAL SYSTEM TYPE APPROVED:**

|                |   |   |
|----------------|---|---|
| Brand / Origin | : | Aspock  |
| System voltage | : | 24 Volt, complies with (ADR).   |
| Coupling       | : | 2x 7 poles, incl. 1 parking position for 2nd cable. 1 pol 15 pin socket                       |
| Safety         | : | All lights to be LED, with fire proof and well isolated, installation are complying with ADR. |
| Connection     | : | Flexible coil connector.  |

Electrical system for semi-trailer is compatible with the electrical system of the Tractive unit.

**EARTHING:**

Two static straps connected to the rear end of the chassis (One on each side end).  
Earthing brass lugs will be fitted on the chassis, walkway, with min. dist. of 3000 mm between.  
15 meter spring driven earth bonding reel with controlled retraction will be fitted of the rear of the trailer for easy services

**HYDRAULIC SYSTEM :**

- PTO (POWER TAKE OFF) : The tractor must have a flanged PTO (power take-off valve).
- Hydraulic Pump with gear type (Turkish Brand)
- DK 42 Coupling
- Cooling System 45 cm fan
- Oil Tank 80 Liter capacity
- Hydraulic motor coupled to the fuel pump.
- Suction and Pressure hydraulic hoses
- Quick Couplin Jacks 2 units

**FUEL PUMP**

- 2,5 " (Star Type ) high pressure pump  
The ER 1114 Y (Star Type) pump is a 2.5", high-pressure pump in a single housing with flush inlet and outlet connections. The internal mechanism consists of cast iron components. To ensure reliable performance even with high petroleum derivatives, all dynamic elastomers, namely the seals and O-rings, are made of Viton or Teflon.

**METER**

|                            |   |   |
|----------------------------|---|---|
| Type                       | : | 90° connection, positive displacement, double vane, single rotor, rotary                |
| Flow rate (minimum)        | : | 70 l/min (Maximum 750 l/min)  |
| Maximum Operating Pressure | : | 10 bar (145 psi)  |
| Nominal Operating Pressure | : | 3.5 bar (51 psi)  |
| Operating Temperature      | : | -20°C / +40°C   |
| Accuracy                   | : | ±0.25%  |
| Numbering Unit             | : | ER 79 ECR   |
| Dimensions (EBY)           | : | 48×59×51 cm   |
| Flange Diameter            | : | 2" – 2½" – 3"   |
| Meter Body                 | : | Cast Iron (PIG GG25)  |
| Air Separator Body         | : | Cast Aluminum (AlSi10Mg) Maximum capacity for diesel fuel transfer is 35 tons per hour. |

**ACCESSORIES. SAFETY FITTINGS & MISCELLANEOUS:**

- Three wheel mudguard fender well fabricated and supported to the chassis both sides.
- Two rubber flaps attached to the fenders.
- Water tank with a tap for the driver usage,
- Side and rear reflectors.
- Two sign of ADR approval on rear and left side of the tank, Flammable liquid sign,
- Class 3. Hazardous stickers and product identification signs.
- Emergency pneumatic switch to close valves in case of emergency on the rear LHS of frame.
- Two of 6 kg ABC powder fire extinguisher on lockable plastic holder ( 1 in front & 1 in rear ).
- Grounding reel with 15 m. of wire and grounding clip.
- Two-wheel chock blocks with holder (Plastic)
- One flap rubber at length of rear buffer on under run guard
- One lockable toolbox - - - - - Operating manual

**PAINT WORK & FINISHING COLOR: Before the paint chemical washing , After epoxy primer , final color according to customer request acrylic paint**