

Aircraft Refueler JET A1 semi trailer

40.000 liters – 3 compartments

Flowrate 80+16 m³/h



OVERVIEW

Aircraft refueler made by an IVECO tractor truck equipped with a complete aircraft fueling equipment and 40.000 liters tank capacity semi trailer.

- ✓ Designed for aviation fuel JET A1.
- ✓ Underwing pressure refueling with aircraft coupling,
- ✓ Overwing refueling with nozzle
- ✓ Coalescer/Separator filter and volumetric meter.

STANDARDS

Designed in accordance with the following rules:

- ✓ Guidelines for the operating procedures of aviation fuels,
- ✓ Vehicle design based on European regulations, especially ADR,
- ✓ Separator Filtration following API/IP 1581 last edition,
- ✓ Aircraft hose according to EN ISO1825.

PERFORMANCES

- ✓ Tank capacity 40.000 liters (2 compartments 10.000L + 1 compartment 20.000L).
- ✓ Bottom loading by 4" API coupling.
- ✓ Fuel distribution filtered and metered by distribution group driven by PTO.
- ✓ Fueling flow rate: 1300 lpm by coupling, 270 lpm by nozzle.
- ✓ Defueling (only by coupling).

DISTRIBUTION GROUP

Operation side is left.

Dry connection for tank connection

Pump driven by PTO chassis:

- ✓ **Centrifugal pump GORMAN GR03.**
- ✓ All pipes in stainless steel alloy.
- ✓ Strainer upstream pump.



Downstream pump:

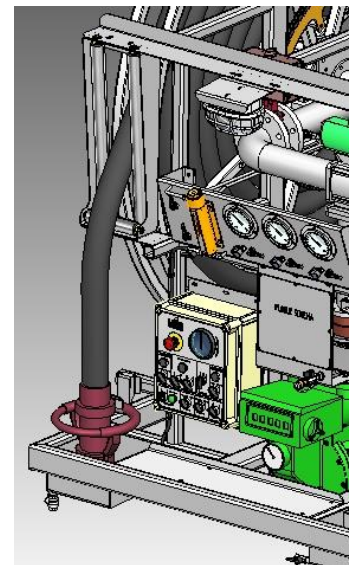
- ✓ Pressure control valve.
- ✓ Coalescer/Separator filter following API/IP 1581, last edition, fitting with waterdrain, automatic air eliminator and differential pressure gauge.
- ✓ 1 Volumetric meter SATAM ZC17-80/80 with 5 digit mechanical display with reset and 9 digit totalizer.
One meter for 2 distribution lines.
- ✓ Manual control valve
- ✓ Electric handle with timer;

Underwing line

- ✓ Hose reel adapted for aviation fuel, with motorization.
- ✓ 1 aviation hose ND63 length 25 meters.
- ✓ 1 Underwing pressure fueling nozzle, strainer, vacuum breaker, 45psi hose end pressure controller and swivel.

Overwing line

- ✓ Hose reel adapted for aviation fuel, with motorization.
- ✓ 1 aviation hose ND38 length 30 meters.
- ✓ 1 Aircraft Overwing nozzle, with 100 mesh cone strainer, bonding cable and crocodile clamp.



Deadman system with override

Defueling Capabilities by coupling

Interlock system with sensors on:

- Coupling and nozzle
- Earthing clamp

Specification with 3 compartments semi trailer

The operator must choose the compartment to empty and connect a hose from semi-trailer to tractor at each distribution operation.

It is not possible to move the aircraft refueler with hose connected between tractor and semi-trailer.

The foams resulting from degassing are collected in a tank which must be emptied regularly.

POSTE DE COMMANDE

Remote control

- ✓ Start/Stop Engine
- ✓ Engine throttle
- ✓ PTO ON/OFF control
- ✓ Engine emergency stop

Control Panel:

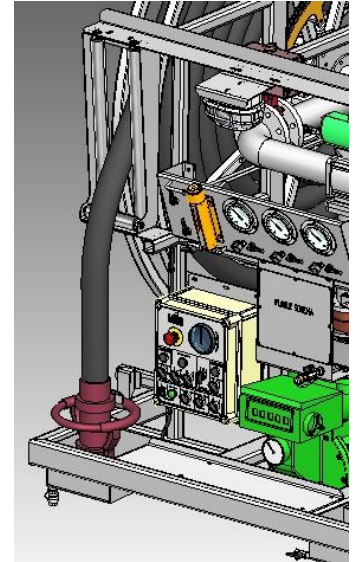
- ✓ Differential Pressure gauge
- ✓ Pump Pressure gauge
- ✓ Vacuum Pressure gauge
- ✓ Jet Pressure gauge
- ✓ Pneumatic circuit Pressure gauge

Labeling

- ✓ Schematic of distribution circuit
- ✓ Labeling of each valve, gauge and test point

Lighting

- ✓ Working light
- ✓ Control panel and filling connection lights



OTHER DEVICES

FILTER ELEMENTS:

- ✓ 2 sets of filter elements (1 for 1st use + 1 as spare),

JET A1 CONTROL

- ✓ Gammon connector,

EQUIPOTENTIALITY:

Earthing/grounding strip, on all pipe connections & between frame, sub-frame and tank

- ✓ Reel, hand operated, with 30 m grounding/bonding cable (steel, PVC coated) and brass crocodile clip.
- ✓ Earthing/grounding clamps, located on both sides of the tank.

ACCESSOIRES:

- ✓ Tool box
- ✓ Spare wheel on its support.
- ✓ Set of tools

SECURITIES:

- ✓ Automatic depressurization system, with back line to the tank,
- ✓ Engine truck emergency shut off at operation post
- ✓ Overfill prevention system in the tank,
- ✓ BC9kg fire extinguisher in its support (1 on each side),
- ✓ ABC2kg fire extinguisher in cab
- ✓ All valves labeled,
- ✓ ADR labeling



SPECIFIC FUNCTIONS

- ✓ **External suction:** Connection before pump, DN80 valve and symmetrical connection.
- ✓ **Defueling :** only by aircraft coupling.

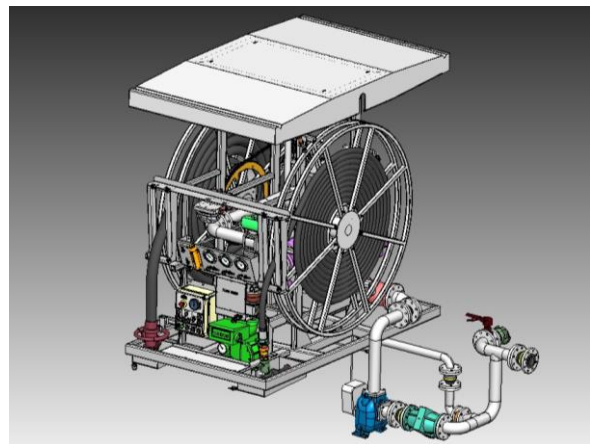
PRESENTATION

- ✓ **Internal surfaces :** No painting.
- ✓ **External surfaces :** Sandblasting
Polyurethane paint
1 color, White (other on demand).

Each element (tank, frame, reel ...) are treated and painted separately.

PRESTATION

- ✓ Tank and piping test
- ✓ Functional tests
- ✓ Operation manual
- ✓ List of spare parts



SEMI TRAILER

Transport of ADR class 3 **jet fuel**

Maximum charging temperature 50 ° C

Working pressure: 0.12 bar

LGBF

Construction according to standard EN 13094

SHAPES – DIMENSIONS

Capacity: **40,000 liters** TOTAL

Number of compartments: 3,

2 compartments of 10,000L + 1 compartment of 20,000L

Stainless steel grade: EN 1.4301 / 1.4307 (AISI 304/304 L)

Shape: straight cylindrical

Ferrule: 3 mm, Breakwater, Reinforced structure

P.T.C.A: 50,000 KG (18,500 KG on the pivot and 31,500 KG on the running gear)

ACCESSORIES EQUIPPING THE COMPARTMENTS

Manhole Ø 20 "of PAF type bolted on stainless steel extension:

- Pressure relief device
- Quick closing
- Nitrile seal
- Standardized breathing vent
- Overfill limiter with test function
- Dipstick

Drain-fill DN 100:

- Sequential light alloy DN 100 bottom valve, individually pneumatically operated
 - Pneumatic indicator light indicating the open / closed position of the valve
- Light alloy DN 100 piping brought between props and running gear on the right side with API 4 "adapter manually operated by handle with product presence indicator and protective cover

Hydrocarbon seals

MISCELLANEOUS EQUIPMENT

Non-slip right side walkway in light alloy, 400 mm wide

Stainless steel handrail, controlled by the folding of the ladder, height 1000 mm with 3 sub-rails, with return to the front

Stainless steel access ladder

4 flexible supports light alloy tubes Ø 160 mm, with rear doors fitted with a drain valve:

- 2 flexible tubes of 6 m long on the right side
- 2 flexible tubes of 6 m long on the left side

"Hazardous Materials" equipment:

- 2 fire extinguisher supports and 2 BC9kg fire extinguishers
- 1 "Danger" plate holder, 1 "Environment" plate holder and 1 "Product" plate holder at the back
- 1 "Danger" plate holder and 1 "Environment" plate holder per side
- 1 "Product" plate, 3 "Danger" plates Cl.3 and 3 "Environment" plates
- 3 earth terminals, right side, left side and at the back towards the drain
- Grounding

CHASSIS EQUIPMENT

Tridem running gear, 36 T, on a mechanically welded high elastic limit steel frame

3 fixed axles 12 T, Drum brakes, Mechanical multi-leaf suspension

13 tires on steel rims with twin tires (including 1 spare wheel)

Braking EEC code 2 lines with ISO coupling heads and self-adjusting levers

Parking brake on 2 axles by spring chambers

ABS with 2 sensors on 1 axle powered by the ISO 7638 socket (with protective cover)

Light alloy air tank

24 V electrical equipment conforming to the EU Code:

- ISO 15 pin socket
- White LED front lights
- Orange LED side lights
- Rear clearance lights integrated into the rear lights
- Support for brake hands and electrical outlets on the front panel

Bumper in anodized light alloy and 7-function rear lights with integrated reflector triangles
2 basket-type spare wheel carriers,
Side Bumper guard 2 bars in anodized light alloy on stainless steel supports
2-speed landing gears with flat runners on reinforced stainless steel supports
Coupling plate and standard 3 "½ JOST removable pivot with stainless steel plate nose
2 yellow plastic wheel chocks on plastic supports

GAUGE TESTS

Tank calculated and tested according to the prescriptions of ADR relating to petroleum products of class 3: tank code LGBF according to chapter 6.8 of ADR.

However, the vehicle is not ADR.

Tests by Bureau Véritas

Working pressure: 0.12 bar

Factory gauging with centimeter scale over the entire height (piping included)

Dipstick with support on the top of the tank

Radiographic control

Note: Registration in the country of destination is the responsibility of the customer.

Compliance with axle loads and gross vehicle weight (GWW) with local regulations is the responsibility of the customer .Any procedures necessary for the approval of equipment in the country of destination are the responsibility of the customer.

PRESENTATION

Exterior surfaces: RAL paint on the tank body

Degreased interior surfaces

Polyurethane paint finish on the frame

RAL color to be defined

Axles, suspensions and wheel hubs (cataphoresis treatment) : Black

Light alloy air tanks, landing gears and plate supports : Black

DIMENSIONS - EXAMPLES

✓ Overall Dimensions: 18,00m x 2,50m x 3,50m



TRUCK CHASSIS

Brand : **Iveco T-Way AT720T43TH AT ADR 6x4 Tractor Head**

Cabin : Day cab

ADR compliant and:

- ✓ Air conditioning
- ✓ ABS and cruise control
- ✓ Pneumatic driver seat
- ✓ Rotating beacon lights
- ✓ PTO