

**Aircraft Refueler JET A1**  
**20.000 liters - Flowrate 80+16 m<sup>3</sup>/h**  
**on IVECO TRAKKER 6x4**



*Pictures only for exemple*

## OVERVIEW

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**Aircraft refueler with 20.000 liters tank capacity and a complete aircraft fuelling equipment mounting on a three-axle truck chassis IVECO.**

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

## STANDARDS

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**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.

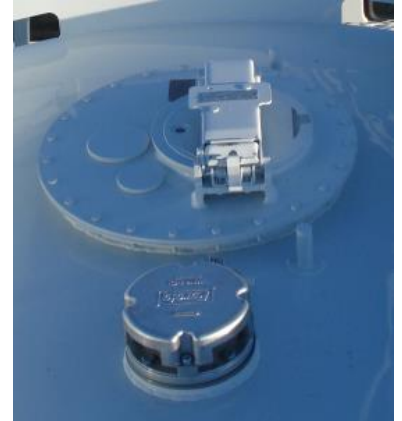
## PERFORMANCES

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- ✓ Tank capacity 20.000 liters excluding deadstock and expansion volume. Tank and pipes constructed in stainless steel alloy.
- ✓ Bottom loading of the tank with aircraft coupling connection controlled by high level shut-off.
- ✓ 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).

# TANK

- ✓ Capacity 20.000 liters (+3%).
- ✓ Water sump.
- ✓ Stainless steel tank, thickness in accordance with ADR.
- ✓ Double D section
- ✓ Single compartment with baffles
- ✓ 3° slope to backwards
- ✓ 10" Bayham Dial gauge



## **Top of the tank:**

- ✓ 20" Manhole cover with 10" hinged self-latching inspection cover (x2).
- ✓ 02 tank vents valve **YAK RC**
- ✓ Dipstick. Use of dipstick via manhole.
- ✓ Catwalk on top of the tank.
- ✓ Ladder at the rear of the tank.
- ✓ Pneumatic high-level sensor.

## **Bottom of the tank:**

- ✓ All pipes in stainless steel alloy
- ✓ 2 earthing clamps

## **Loading line**

- ✓ 2" ½ aircraft connection.
- ✓ Bottom loading of the tank controlled by high level shut-off with test control button.
- ✓ DN100 pneumatically operated bottom valve.

## **Tankdrain line:**

- ✓ Water sump with inclined bottom, directly welded to tank's lowest area, equipped with Bottom valve, Manual ball valve and connector with cap.

## **Suction line**

- ✓ DN100 pneumatically operated bottom valve.
- ✓ Upstream pump strainer.

## **Tank mounting:**

Truck frame is reinforced by sub-frame; this welded structure is design in accordance with chassis maker rules.

The tank is mounted to the sub-frame through the cradle, with interposition of soft blocks elastomers resistant to hydrocarbons.

# FUELLING GROUP

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Operation side is left.

Pump driven by PTO chassis:

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



## Downstream pump:

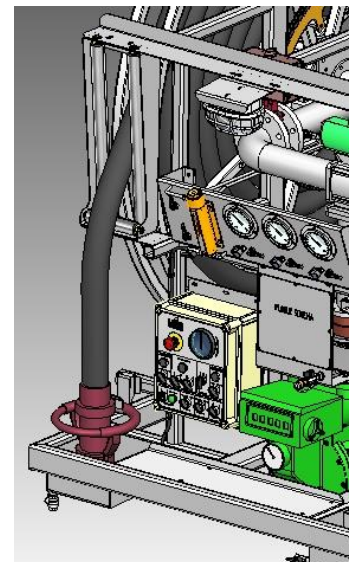
- ✓ Pressure control valve.
- ✓ Coalescer/Separator filter following API/IP 1581, last edition, fitting with waterdrain, automatic air eliminator and differential pressure gauge.
- ✓ 1 Volumetric meter SATAM ZC17-80/80 with 5 digit mechanical display with reset and 9 digit totalizer.  
One meter for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

## POSTE DE COMMANDE

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### Remote control

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

### Control Panel:

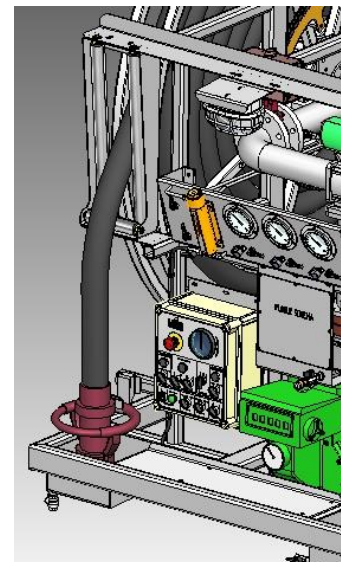
- ✓ Differential Pressure gauge
- ✓ Pump Pressure gauge
- ✓ Vacuum Pressure gauge
- ✓ Jet Pressure gauge
- ✓ Pneumatic circuit Pressure gauge

### Labeling

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

### Lighting

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



## OTHER DEVICES

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### FILTER ELEMENTS:

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

### JET A1 CONTROL

- ✓ Gammon connector,

### EQUIPOTENTIALITY:

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

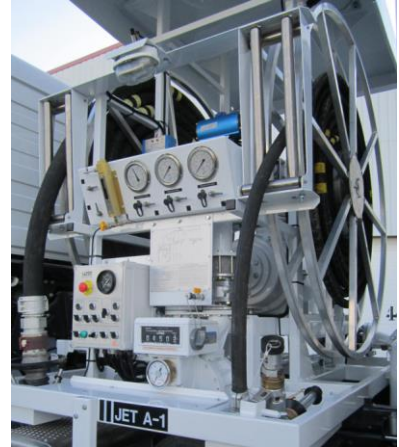
- ✓ Reel, hand operated, with 30 m grounding/bonding cable (steel, PVC coated) and brass crocodile clip.
- ✓ Earthing/grounding clamps, located on both sides of the tank.

### ACCESSOIRES:

- ✓ Tool box
- ✓ Aviation fueling ladder with its support
- ✓ 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.
- ✓ **Defuelling** : only by aircraft coupling.

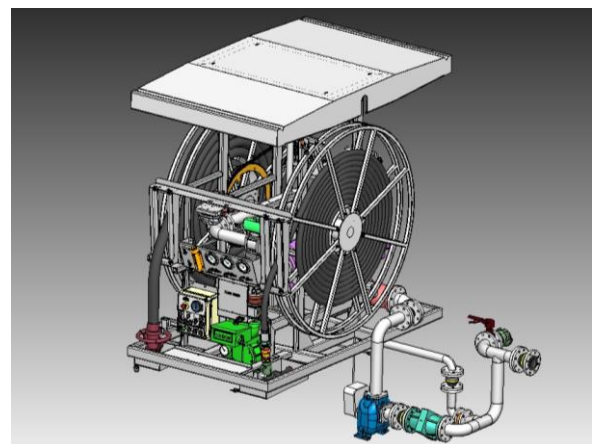
## **PRESENTATION**

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

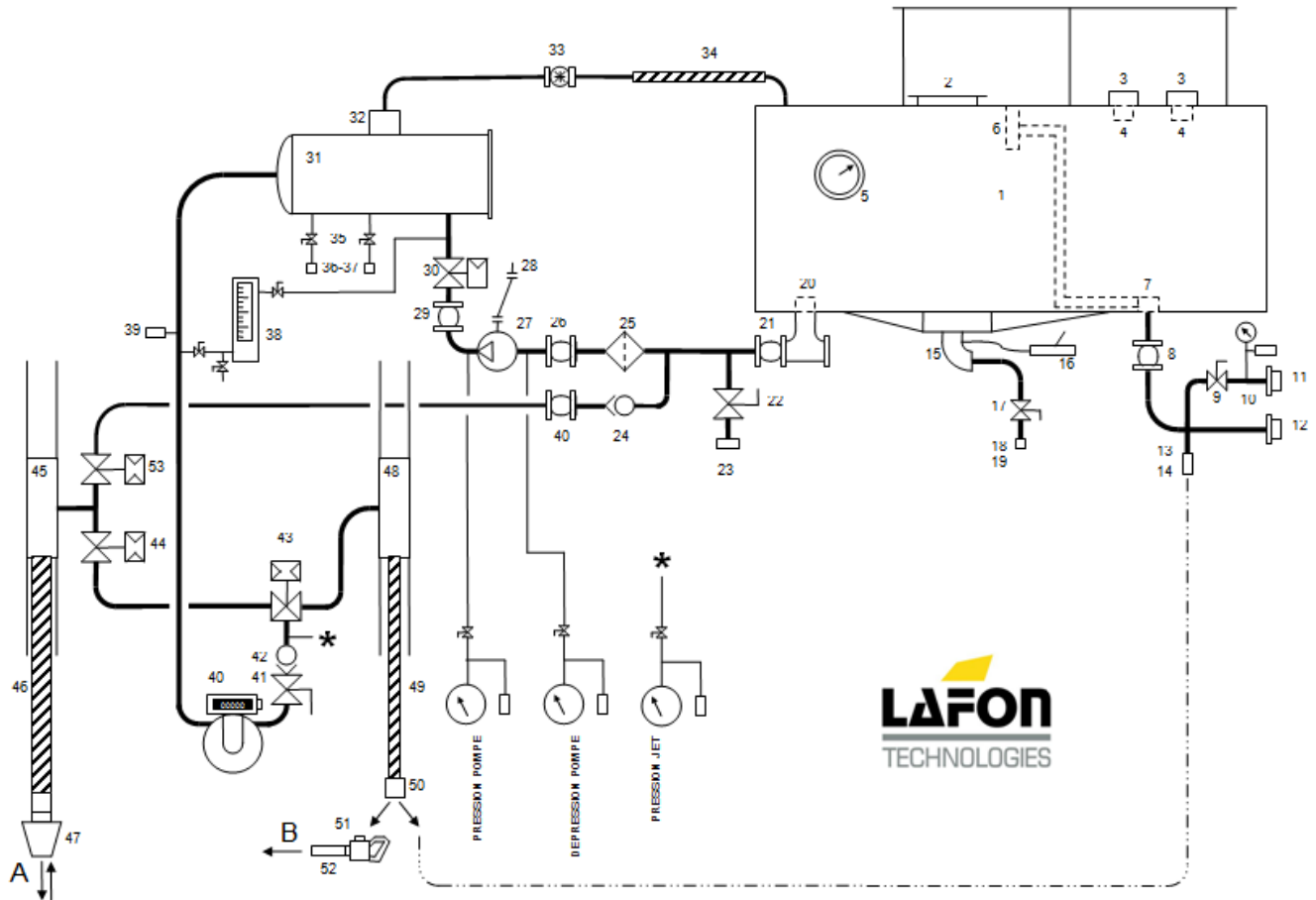
Each element (tank, frame, reel ...) are treated and painted separately.

## **PRESTATION**

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



# FLOW DIAGRAM



Rep	Nb	Désignation	Rep	Nb	Désignation	Rep	Nb	Désignation
1	1	Citerne 20000 L inox	19	1	Bouchon aluminium	37	2	Bouchon aluminium
2	1	Trou d'homme	20	1	Clapet de fond aspiration	38	1	Manomètre différentiel à piston
3	2	Event de respiration	21	1	Joint souple + spirale	39	1	Prise de test auto obturante
4	2	Cheminée anti-rejet	22	1	Vanne papillon manuelle	40	1	Compteur volumétrique
5	1	Jauge	23	1	Boite symétrique à verrou	41	1	Vanne BS manuelle d'ajustement
6	1	Sonde de niveau pneumatique	24	1	Clapet anti-retour	42	1	Clapet anti-retour
7	1	Clapet de fond remplissage	25	1	Préfiltre	43	1	Vanne 2 voies BS en L pneumatique
8	1	Joint souple	26	1	Joint souple + spirale	44	1	Vanne papillon pneumatique
9	1	Vanne papillon manuelle	27	1	Pompe volumétrique	45	1	Enrouleur monospire
10	1	Manomètre	28	1	Transmission à cardan	46	1	Flexible aviation distribution/reprise
11	1	Prise aviation	29	1	Joint souple + spirale	47	1	Accrocheur régulateur 2"1/2
12	1	Prise industrielle	30	1	Vanne régulatrice	48	1	Enrouleur monospire
13	1	Embout Q.D. Male BSP	31	1	Filtre absorbeur	49	1	Flexible aviation BSC MF distribution
14	1	Capuchon	32	1	Tête de dégazage	50	1	Embout Q.D. Fem FBSP + capuchon
15	1	Clapet de fond purge	33	1	Indicateur de gaz	51	1	Embout Q.D. Male BSP + capuchon
16	1	Boite à levier	34	1	Flexible aviation	52	1	Pistolet aviation pour distribution
17	1	Vanne à boisseau sphérique	35	2	Vanne à boisseau sphérique	53	1	Vanne papillon pneumatique
18	1	Adaptateur aluminium	36	2	Adaptateur aluminium			