

TECHNICAL SPECIFICATION OF FIRE FIGHTING TRUCK TLF 3500/350 BASED ON IVECO EUROCARGO ML150E24 WS 4X4



Introduction

The description following hereafter sets out the technical details specifying the Fire Truck 4x4 with single wheels on all axes. In the design, simplicity of operation, ease of maintenance and repairs, have been given particular care, but special emphasis has been given to the vehicle's prime purpose, namely simple and speedy extinguishing agent discharge. The fire vehicle can be used with all types of foam making concentrate including AFFF and with soft, black or with sea water. All components of this vehicle are based on approved products, constantly improved and developed. This is the guarantee for absolute reliability and safety of operation.

The engineering and construction of all SV SZCZESNIAK products is conducted in conformity with procedures of the ISO 9001 standards. Moreover, SV SZCZESNIAK has been certified conform with the Environmental Management Standards as laid down by ISO 14001 / EN 14001, the sign of the company's constant ecological commitment towards protection of our environment.

1. Chassis

Variant Description	Iveco EUROCARGO
Drive	4x4 / constant drive
Cab:	Crew cab (1+1+4)
Wheelbase:	4.150 mm
Steering:	LHD
Front-axle load:	5 700 kg
Rear axle load:	10 000 kg
Perm. gross weight	15 000 kg
Engine	240 HP
Engine standard	EURO 3
Transmission type	Automatic ZF6ASTRONIC 800
Tires	single on rear axles / 14 00 R20

2. Firefighting superstructure

2.1. Driver's cabin and crew cabin integrated in the superstructure

Standard cab, corrosion-protected, suitable for driver and 5 crew member. The cabin forms an entirely closed unit and is provided on each side with large entrance doors, front hinged, with manual operated windows. Large left and right rear mirror. Driver's seat is equipped with headrest and safety-belt and adjustable horizontally and vertically. Front passenger seat is equipped with headrest and safety-belt. Interior paneling out of non-splintering material; cabin with ceiling lights automatically coming on when the doors are being opened. Factory-fitted air conditioning system is provided. The instruments provided in the cab include:

- Speedometer with kilometer counter and tripmeter.
- Revolution counter.
- Coolant temperature gauge.
- Fuel gauge.
- Air pressure gauge.
- Front and rear fog lights warning lamps.
- Hazard warning light.
- Direction indication warning light.
- Oil- and air pressure "low" warning light.
- Parking brake "engaged" warning light.
- Coolant temperature "high" warning light.
- Switch and controls for emergency lights, siren and P.A. system.
- Control light and buzzer for open doors and shutters.
- Control light for PTO engagement.

An original chassis crew cab for 6 crew members, It has large lockable hinged doors with sliding safety glass windows. Crew cab's lighting is coming on automatically wen the doors are being opened. Interior panelling of the crew cab is out of non-splintering material, easy washable. Two large grab handles near each door, guarantee easy access for fire crew members. The crew cab is equipped with its proper air conditioning system. The crew cab is equipped with 4 comfortable seats facing forward. Each seat is equipped with a safety belt.



2.2. Water tank

The water tank has a capacity of **3500 liters**, and is made of corrosion proof glass-fiber reinforced polyester or PP. The tank is equipped with baffle walls which are incorporated along transversal and parallel sections. The water tank is elastically mounted on the chassis runners, according to the "Technical Bodybuilders Handbook" of the chassis manufacturer.

Further outfit:

- 1 Manhole with seal and screw locks, accessible from the roof of the truck.
- 1 Tank to pump suction connection.
- 1 Tank filler neck to refill the tank out of open water sources by the centrifugal pump.
- 1 Hydrant inlet, with fixed and blank cap and ball-shut-off valve.
- 1 Overflow pipe with overflow protection, also acting as airing and ventilation system.
- 1 Water tank level indicator at the pump stand.

Foam tank

The rectangular **foam tank has a capacity of 350 l** and is entirely made out of glass-fiber reinforced polyester or PP. The foam compound tank, integrated in the water tank is suitably protected with removable baffle walls.

Foam compound tank outfit

- 1 Tank to proportioning system connection with ball shut-off valve.
- 1 Filler and drainage with fixed and blank cap and ball shut-off valve.
- 1 Overflow pipe with overflow protection, also acting as airing and ventilation system.
- 1 Foam tank level indicator at the pump panel.

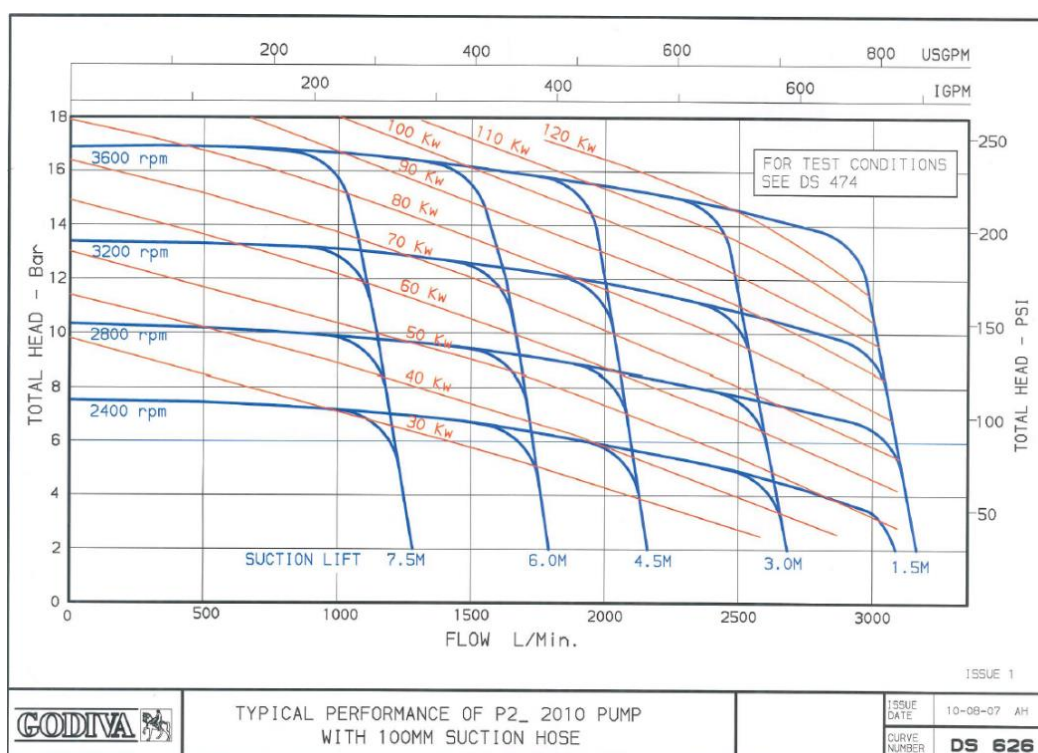


2.3. Firefighting centrifugal pump

Latest model fire pump, multi-pressure, middle center rear mounted and powered by the central power take-off of the chassis, with fully automatic primer sucking water out of a suction height of 7,5 meters within 30 seconds.

Nominal performance 2000 liter/minute at 10 bars outlet pressure in low pressure operation and 250 liter/minute at 40 bars in high pressure operation. The centrifugal pump will be driven by the vehicle PTO. Engagement of the PTO will be done from the cabin.

Pump can be used for feeding from open water sources (negative pressure) or from hydrants or other pressurized water points (positive pressure).



2.3.1. Pump Outfit

1 x Suction inlet, DN110 diameter, fixed with blank cap. Inlet provided at the rear central.

1x Delivery manifold with the following outlets:

2 x Low pressure delivery outlets.

1x Low pressure outlet with shut-off valve for the monitor located on the roof

1x High pressure outlet to the hose reels.

2.3.2. Fire pump control

The fire pump control panel at the rear of the vehicle includes:

- 1 Engine revolution counter with hour counter
- 1 Engine throttle
- 1 Pump suction pressure gauge (manovacuummeter)
- 1. Low pressure gauge for waterpump
- 1. High pressure gauge for water pump
- 1 Water liquid tank level indicator
- 1 Foam liquid tank level indicator
- 1 Indicator warning light (red color) for engine oil pressure
- 1 Indicator warning light for main engine water temperature
- 1 On/off indicator for water pump

Instrumentation panel is illuminated for night use. All instruments and gauges are water- and oil resistant and indications are in end user language.



2.4. Foam generator

An manual adjustable around the pump foam admix system with a capacity for water flows up to 2000 liter/minute is installed. The foam admixing ratio can be selected manually from 3 % till 6 %. Water/foam mixture will be available at all low pressure delivery outlets, the monitor and at the hose reels.

2.5. Roof Monitor

A water- and foam monitor made of stainless steel , equipped with a foam aspirating tube, is installed on top of the pump compartment, at the rear of the vehicle, and can be operated from the monitor platform. The monitor is suitable for plain water and for both AFFF and FP foam agents. Monitor is capable to traverse horizontally by 360 degrees, to be elevated by 80 degrees from the horizontal, and to be depressed by 50 degrees, which is largely sufficient for all types of interventions. The notched capacities of the roof monitor are 1600 – 2400 liter per minute water/foam mixture at 8 to 10 bars. The monitor is manually operated from the monitor platform.



2.6. High pressure hose reel (1 unit)

A high-pressure handline hose reel is provided, fitted in the rear compartment next to the pump compartment, holding min 40 meters diameter 19 mm (DN19) rubber hose, equipped with multi-purpose hand control branch pipe. Hose reel is suitable for water and water/foam production. The hose is interior and exterior rubber coated and has a test pressure of approx. 110 bars. The hose length is wound on an appropriate hose reel. The reel is equipped with a friction brake in order to keep the reel in position. The reel is so designed that one single operator can remove the hose from any position in the 170 degrees sector. Appropriate guide rollers, with ball bearings, chromium plated, are provided. Unwinding is executed manually. Rewinding is done with the help of an electric engine. In case of electric failure, rewinding can be done

manually by means of a convenient worm-gear system. The hose is equipped with a multipurpose high pressure water nozzle designed for the discharge of water, or low expansion AFFF foams, with a capacity minimum 230 liters/minute at 40 bars pressure. The flow is controlled by means of a manually operated shut-off ball valve.



2.7. Electrical outfit

1. Head lights groups containing the direction indicators, the stand light, the high beam and the low beam. Headlamps are protected.
- 2 Reverse lights coming on automatically, when the reverse gear is engaged.
- 1 Rear fog light with switch and control light dashboard mounted.
- 1 Fully automatic interior illumination for the pump and equipment lockers
- 2 Blue flashing lights at the front of the vehicle, mounted on the radiator grill.
- 2 LED beacons, blue color, on the roof of the crew cab.
- 1 LED beacon, blue color, on the rear superstructure wall.
- 1 Siren/public-address system with vehicle amplifier, loudspeaker and microphone. The microphone contains the volume adjuster; the P.A. system overrides the audible warning system by only pushing the volume regulator of the microphone. The minimum output of the P.A.-system is 100 watt.
- 7 Scene lights on the superstructure, 3 at each side of the vehicle and 1 at the rear side.

2.8. Bodywork

All materials used for the construction of the superstructure are completely new and free of defects. Very close attention is paid to the choice of the different materials and the anti-corrosive treatment.



The bodywork of the vehicle is made of aluminum profiles and anti-corrosion treated hot-galvanized steel or aluminum panels. Critical areas are in closed steel tubing. The steel profiles have been treated internally against rust by means of a special injection wax. The whole body has been treated and professionally painted to give the vehicle a high resistance against rust. Underneath the vehicle an undercoat has been sprayed.

The roller shutters are made of light alloy double profiled units, which are fixed together by means of a synthetic joint. This synthetic profile is self-lubricating and resists extreme temperature changes. The roller shutters are water and dust tight.



A total of 7 roller shutters are provided: 3 on each side of the vehicle and 1 at the rear of the vehicle, at the pump compartment. All materials and equipment are fixed in such a way that damage or blocking of the roller shutters is avoided. Automatic locker illumination is actuated by the roller shutters and/or foot boards and is controlled by a master switch with pilot light in the cabin.



The water tank and the foam tank are fitted between the auxiliary equipment compartment, located behind the crew cab, and the pump compartment at the rear of the vehicle. Necessary draining vents for the leaking water are provided. The roof is covered with aluminum chequered non-slippery plates and is bordered by a gallery.



Place for extension ladder and the suction hoses are stowed on the roof, a stable ladder with non-slip steps is fitted at the rear of the vehicle for easy roof access. The necessary protection plates and hand rails are provided. All equipment in superstructure are securely fastened by means of rattle-free fixings. Heavier equipment is fixed on telescopic runners or on sliding frames.



Above rear axle is located step integrated with fender construction allowing to take down equipment located inside locker



3.1. Painting and identification

Rims, protection grid in front of the engine, chassis frame
Crew cabin, fire-fighting superstructure

Black or dark grey
Red RAL 3000/3020

The vehicle will be identified in accordance with customer's requirement, to be advised soonest possible after order acknowledgement.

3.2 Recharging unit

The vehicle is equipped with a provision for recharging the batteries on site from an external 230 volt supply via a cab or rear mounted weatherproof type plug and socket arrangement. A warning light is provided on the dashboard in clear view of the driver to show when the vehicle is connected to an external electrical supply. All electrical circuits will be fused separately suitably indicated and grouped into a common fuse box.

3.3 Panel at driver cabin

In the driver cabin a control panel for operation and control of the superstructure is mounted at the original dashboard with an individual adjustable bracket. The control panel is visible from driver and co-driver. The following list of functions is only an example and it will be adjusted accordingly to the equipment of the vehicle.



4.0 Illustrative photos

Picture of Similar Truck - for Reference purposes only and informative purpose



Picture of Similar Truck - for Reference purposes only and informative purpose

SZCZESNIAK SV also reserves the right to substitute alternative items of equipment should original equipment envisaged become obsolete or unobtainable. We guarantee however that any such substituted parts or equipment will be of equal or superior design and quality.

Drawings and photographs may show optional equipment available at extra charge only. Optional features, if selected, may influence the weight of the appliance