

Page 1 of 13

ZIEGLER – TLF 28/60-10

Water/Foam

000 Major components

- 200 MERCEDES BENZ Chassis 2035 4x2 Actros
- 210 MERCEDES BENZ Crew cabine 1+1+4
- 220 ZIEGLER Equipment locker superstructure ALPAS
- 500 ZIEGLER Firefighting pump FPN 10-2000-2H
- 521 ZIEGLER Body/ground protection
- 530 ZIEGLER Rapid intervention unit
- 540 ALCO Roof water/foam turret HH365 / APF 2.5-C
- 550 ZIEGLER Water tank 6.000 lit.
- 551 ZIEGLER Foam tank 1.000 lit.
- 560 ZIEGLER Foam mixing system ZPV 200
- 711 AKRON Light mast pole



Ilustration vehicle

Additional equipment against additional costs

150 Information signs / labelling

In General:

Control elements: Tire pressure: Maker's name plate: are marked by pictures or clear signs is stated in black above all wheels at the driver's door a maker's name plate, 105x74 mm, according to DIN 825 is mounted.

Labelling:

The labels is in **english** language.

160 Painting

1	Paintwork of the complete vehicle: Paintwork in red, RAL 3000 (superstructure and cabin) Type of paint of superstructure:
1	Structural paint Paintwork of front bumpers:
1	Original colour of chassis Paintwork of mudguards in front:
1	Original colour of chassis Paintwork of rims:
1	Original colour of chassis
Further p	paintwork:
1	Greasing spots in yellow, RAL 1016
1	Equipment lockers inside in silver, RAL 9006
1	Roller shutters, aluminium coloured
1	Cavity coating Lower area of the superstructure
1	Undercoating: The lower side of the equipment locker superstructure is provided with durable undercoating

200 MERCEDES BENZ Chassis 2035 4x2 Actros

Make:	MERCEDES-BENZ
Туре:	MB 2035 4x2 ACTROS
	with short cab 1+1, F07
Drive:	on road 4x2
Wheel ba	se: 4.500 mm

Other:

Engine:	V-6-cyl Diesel engine OM 501 LA, MX2 -Engine version, Euro 2, MS0 -PSM, body and trailer CAN, ISO 11992, EM8 -with engine brake with constantly open throttle valve -air intake from rear, MG8
Output:	260 kW/354 HP at 1.800 1/min
Gearbox:	MB Transmission G 210-16, GC3
P.t.o.:	NA 125-10b, with i = 1,52/1,84 x nMot for FP, NF1 gear oil cooling, N55
Brake unit:	EG disk brake unit with ABS, BB0
	Compressed air dryer, heated, B65
Electrical s	ystem:
	vehicle voltage 24 V,
	batteries 2 x 12 V/165 Ah
	generator 28 V / 80 A
	fog searchlights, L16
	Reversing warning device, JW0
	Power windows for driver's / co-driver's door, FE5
Fuel tank:	400 I, KS4
Tire equipm	nent: 12 R 20 (7x), 6 + 1 spare-wheel. With spare-wheel holder on the roof (Ziegler).
Deleti Cab r Speed Cruise Deleti Fold-t First a Tool k 1 whe Tyre i Hazai Warn Fire-fi Vehic BAI s 4 sea BA,K	on, rear underride guard (EC), C95 ear wall, straight, F24 dometer, J10 e control, MD9 ion, immobiliser (transponder), FW2 up seat, co-driver, SF0 aid kit, Y10 kit, Y20 eel chocks, Y27 inflating hose, 25 m, Y35 rd warning triangle, Y44 ing lamp, Y45 ighting vehicle, Z27 ele, for right-side traffic, ZZ3 iteel crew cab length 1680mm, KFCJ ts at rear wall with seat belts and brackets for SFK Driver's cab painted in red, RAL 3000

Permissible weights:

total weight	20.500 kg, TS6
front axle	7.500 kg
rear axle	13.000 kg

210 MERCEDES BENZ Crew cabine 1+1+4

 The crew cab consists of the original MB double cab with 4 doors. Single seats for driver and co-driver, with head rests and three-point automatic safety belts. In the rear area of the crew cab an original seat bench, in driving direction, with through seat upholstery and head rests for 4 crew is mounted, with tool box below. All seats in driving direction are provided with automatic safety belts and head rests. The seat bench is provided with 4 integrated brackets for compressed-air breathing apparatus and for this reason these apparatus can be put on during slow drive (MB).

220 ZIEGLER Equipment locker superstructure ALPAS

The modular superstructure consists of three parts. In the front part, after the driver's cab an **equipment locker** is provided where the equipment is stored. The equipment locker is shut by **2** dust- and water-tight **ZIEGLER AZ shutters**.



After the equipment locker the **extinguishing agent tank** is mounted elastically (rubber metal bearings) on the assembly frame. The lateral wall of the tank is also the external wall (tank superstructure).

A second equipment locker is positioned behind the water tank (instead platform) The pump unit, the quick-intervention unit and additional equipment is installed inside this locker. The equipment locker is shut by 3 dust- and water-tight ZIEGLER AZ shutters.

The equipment lockers consists of a solid aluminium panelling system with light structural profiles **(ALPAS).**

Thanks to the connection of the aluminium elements by drop-forged parts a very high flexural strength and an extremely high torsion strength is provided.

The roof is glued with aluminium padded plate.

The equipment locker floors and partially the partitions and shelves are made from aluminium double padded plate.

Between front and rear axle left-hand side and right-hand side below the superstructure each one tread is mounted.

The equipment locker lighting is automatically done by magneto switches.

The fire-fighting equipment is safely and practically stored in slides and drawers in the equipment lockers, on the roof and in the driver's cab. The inside installation is **variable** done via an **aluminium profile rail system.**

The roof can be walked-on and is provided with an **aluminium roof screen**. Access to the roof via an ascending ladder at the rear of the vehicle, **right-hand side**.

Further equipment of the superstructure:

- 5 **AZ-LOCK Equipment lockers**, instead of standard
- 5 **AZ Shutters, lockable**
- 1 Bracket for scaling ladder, 4 sections, on roof of superstructure, lefthand side
- 1 Bracket for suction hoses, on roof of superstructure, right-hand side

500 ZIEGLER Firefighting pump FPN 10-2000-2H



Figure 1: Illustration pump (a) and QH diagram (b)

Dual stage centrifugal fire pump FPN 10-2000-2H The low pressure pump is in conformity with DIN 14420 respectively EN 1028

Output:nominal output:2.000 l/min at 10 bar and 3 m suction heightmax. output:2.800 l/min at 10 bar and and tank operation

Materials: castings (impeller, pump cover, pump housing) are made from sea-water resistant light metal alloy. Pump shaft, split water rings are made from corrosion-resistant steel. Drain cocks are made from brass

Priming unit: by automatic priming system ZIEGLER - TROKOMAT – PLUS

Advantages: the centrifugal fire pump and its components are very solid and extremely reliable.

Insensitive against dirt water. Insensitive against frost since the centrifugal fire pump can be quickly and completely drained. No foreign agents are necessary for the priming unit

Drive: by the vehicle engine via a joint shaft line from the p.t.o. of the gearbox.

Installation: in the rear of the vehicle

Control: all switchings for pump operation are made at the pump operator's stand at the centrifugal fire pump. Switching on of the centrifugal fire pump is made in the driver's cabin by **standard p.t.o. switching** (chassis).

Configuration low pressure pump:

- 1 central suction inlet with BSS 4" tight coupling and blank cap, lockable, via butterfly valve, rear side in the pump bay
- 1 tank suction line, DN 125, lockable, without butterfly valve
- 4 delivery outlets BSS 2,5" female with tight coupling and blank cap, lockable, each 2 left-hand side and right-hand
- 1 tank filling line, DN 32, for filling of the water tank via centrifugal fire pump, lockable
- 1 delivery outlet, DN 80, to turret, lockable directly at turret
- 1 delivery outlet, DN 50 to body/ground protection unit, remotecontrolled lockable
- 1 delivery outlet, DN 32 to quick-intervention, lockable
- 1 feed water line, DN 32, lockable
- 1 flush line, DN 32, lockable

2drain cocks at the centrifugal fire pump

Page 7 of 13

Technical description

520 Pipings

All pipings being in contact with foam are **corrosion-resistant.** Partially, the pipings are **hot-galvanized pipes**, nondeformable **rubber hoses** and nondeformable **plastic hoses.**

Type of couplings: british BSS



521 ZIEGLER Body/ground protection

The body/ground protection unit is consisting of 2 front **nozzles** and 2 **nozzles** below the vehicle with a total output of approx. 400 l/min at 10 bar. The body/ground protection unit is used for protecting the rear and front wheels against ground fires.

Front spray nozzles:

At the front side **2 foam pattern spray nozzles** are provided. The foam fan pattern spray nozzles are mounted and have a throw of approx. 5 m as well as a width of throw of 6 m.

Rear spray nozzles:

At the rear side **2 foam pattern spray nozzles** are provided and they are connected with the front nozzles through a joint extinguishing agent feed line.

Opening respectively shutting of the body/ground protection nozzles is made from the control panel in the driver's cab. All nozzles are activated simultaneously.

530 **ZIEGLER** Rapid intervention unit

Quick-intervention unit low pressure

Installation:	right-hand side, rear
Туре:	one GRP hose reel with brake being connected with the
	centrifugal fire pump.
	The reel is suitable for taking 50 m nondeformable

Page 8 of 13

delivery hose **DN 25** with coupled multipurpose branchpipe. Coiling of the delivery hose is made by hand crank.



Equipment of Quick-Intervention Unit:

- 1 Non-deformable delivery hose, 50 m, S25 (see equipment list)
- 1 Multi-purpose branchpipe C (see equipment list)
- 1 Roll-type window for quick-intervention reel

540 ALCO Roof water/foam turret HH365 / APF 2.5-C

roof turret ALCO HH365

1

water turret with adjustable swivelling lever and clamping device for horizontal and vertical movement. Water operation by a multiple gallonage nozzle with infinite adjustment from full jet to spray jet.



Output:water approx. 2.000 l/min at 8 barThrow:water:Adjustment and

Page 9 of 13

swivel range:	horizontally	infinitely 360 degrees
	vertically	-15 degrees until +70 degrees
	(dependent	on superstructure)
Installation:	on the roof o	of the rear equipment locker

Operation: manual shut-off flap extinguishing agent

- 1 turret ALCO HH 365, hinged type
- 1 **Foam pipe SW 16**, for turret ALCO HH365 **Output**:foam approx. 1.600 l/min at 8 bar

550 ZIEGLER Water tank 6.000 lit.

The water tank is designed as tank superstructure. Lateral wall = external wall Capacity: usable approx. 6.000 I (+/- 4%) Material: GRP, corrosion-resistant Manhole cover: 1x dia. 500 mm, with snap closure Access: via roof of superstructure Baffles: transverse, the transverse walls are removable Filling lines: 1x line with 2x 2,5" male tight coupling and blank cap and non-return valve, for filling via hydrant, lockable, in the pump bay 1x line DN 32 for filling via centrifugal fire pump, lockable 1x pressure gauge in the hydrant filling line Suction line:1x line DN 125, lockable Overflow: 1x line with pressure relief valve 1x aeration and deaeration unit Draining: 1x shut-off cock at suction sump, can be operated from the pump operator's stand

Tank level: 1x electric indication at the pump operator's stand

551 ZIEGLER Foam tank 1.000 lit.

The foam tank is integrated in the water tank.

Capacity:	usable approx. 1.000 l (+/- 4%)
Material:	GRP with UV-resistant lining
Manhole co	ver:
	1x dia. 500 mm, with snap closure
Access:	via roof of the superstructure

1

Page 10 of 13

Filling line: 1x filling respect. draining connection, DN 19, lockable
 Suction line:1x suction connection to proportioning unit, DN 50, lockable
 Overflow: 1x line DN 40

 1x aeration and deaeration unit

 Tank level: 1x electric indication at the pump operator's stand

560 ZIEGLER Foam mixing system ZPV 200

Foam proportioning unit

A **ZIEGLER pump proportioner ZPV 200** is installed in the pump unit. The max. admixible foam agent quantity is approx. 200 l/min., i.e. at a delivery rate of 2800 l/min up to approx. 7 % foam agent can be mixed to the extinguishing water.

The foam compound is sucked from the tank and mixed with the extinguishing water of the centrifugal fire pump according the injector pump principle.

Via a control cock at the ZIEGLER pump proportioner the suction quantity of the foam agent is adjustable.

1 Foam agent external suction connection

1x DN 40 with tight coupling and blank cap 1,5" male, lockable



650 Control system

 Pump control panel BKT (small type), provided with:

 Rpm adjustment
 +/-(electrical)

 Contents indication
 water

 Contents indication
 foam

Page 11 of 13

Technical description

Pressure gauge -1 bar up to 25 bar Pressure gauge 0 bar up to 25 bar Rpm meter + working hour recorder



700 Power supply

1 **Charging plug socket** A 16 at driver's entrance **outside**

710 Lighting

1	Spotlight (Hella art. no. 123243) in front right-hand side at driver's cab, with rigid searchlight support
1	Roof lighting
4	Lighting (Hella 102118) for equipment lockers and pump bay
2	Original chassis rear lights at the superstructure, rear side, below at superstructure
2	Three-chamber rear lights at the superstructure, rear side, on top

711 AKRON Light mast pole

 Push-up telescopic light-mast pole Akron Extenda Lite, type ELSS-19DC-PS-SM4 with 1 spotlight LED Akron SceneStar ELS-19DC 10-36V, 220 W
 Execution: The light-mast is rigidly fitted in the front part of the superstructure. It is pushed-up and pivoted manually from the ground.
 The spotlight is switched on in the driver's cab.

720 Signalling unit

2	Round beacon lights, RKL B2, red, on driver's cab, with metal
	protection
1	Acoustic signalling unit, Bosch, 2-tone unit

740 Controls

2	Control lights in the driver's cab for round beacon light and signalling unit
1	Control light in driver's cab for started centrifugal fire pump
1	Control light in the driver's cab for opened equipment lockers

800 Equipment and brackets

1 Storage for delivery hoses on the plastic frame



900 Other vehicle equipment

1 Shackle holders at the rear with shackles for a trailer load corresponding with the permissible weight of the vehicle