

# STARTER





### Driver's ergonomics:

- ISRI driver's seat with pneumatic suspension.
- Separated heating system for driver and passenger compartment.
- Radio-CD with 5 speakers, volume adjustable for driver and passenger compartment.
- Pneumatically adjustable steering column.
- Lockable driver's glove box.
- Board computer.

### Passenger confort:

- Dark tinted double glazed windows with 6 hopper windows.
- Comfortable seats with fixed armrests and anti-vandalism seat back.
- Luggage racks.
- Central illumination of ceiling with integrated loud speakers.
- Curtains.
- Large luggage compartment.
- Large side windows over full length.
- Disabled equipment:
  - Contrasting colours for step well, aisle, grab handles and hand rail,
  - "stiff leg" seats (2),
  - Universal supports for destination equipment.
- Webasto heater (optional).

### Safety on board:

- Integral brake system with disc brakes on both axles.
- Anti skid system for wheels, ABS, EBS and ASR standard.
- Anti roll over protection according ECE R66.
- Warning system when doors are open.
- Panoramic wind screen.
- Electrically heated driver's window and door window.
- Audible reversing signal and reversing sensors.



▲ Disabled equipment for 1 or 2 wheel chairs.



▲ Possibility for installation or preparation of wheel chair lift (with double doors, floor mounted fixation points and electrical wiring).



▲ Simple but functional rear view mirrors electrically heated (electrically controlled, as option).

▼ Standard 4 wheel covers.



▼ Preparation for destination equipment.



▼ Control unit for destination equipment with driver's light.



## Reliability combined with profitability

*The value of the **MAN chassis**, which is used for the Starter has proven it's quality and durability (available in 2 engine versions, 240 and 280 bhp and optional with D20 engine in 310 and 350 bhp).*

*The MAN engine will offer you economical fuel consumption for combined all round transport use.*



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▲ Nicely and optimally ergonomically styled driver's compartment.

▼ Decency screen covered with shock absorbing material.



▲ 3 Point seat belts and comfortable arm rests on all seats.



## Choice of 2 lengths

**12 m / 57 + 1 seats and 12,70 m / 61 + 1 seats.**

*Your choice to optimise the Starter to your needs and requirements in order to increase your profitability.*

◀ Body structure with stainless steel panels



▲ Simple but functional luggage racks (optional: closed luggage racks).



▲ Tray table and preparation for ticketing machine is optional.



## DIMENSIONS AND WEIGHTS

- Maximum total weight: 18 tonnes (19 tonnes BE + FR).
- Empty weight: 12 tonnes (depending on specification).
- Total length: 11,995 mm / 12,720 mm.
- Total width: 2,500 mm.
- Wheelbase: 5,940 mm / 6,640 mm.
- Internal height – free height in interior: 2,000 mm.
- Vehicle height – excl. air con: 3,300 mm (incl. air con: 3,383 mm).
- Front overhang: 2,605 mm.
- Rear overhang: 3,450 mm.
- Luggage space capacity (optional): 3 m<sup>3</sup> (5.5 m<sup>3</sup> if 12.7 metre version).

## SEATING CAPACITY

12 m - 57 + 1 / 12.7 m - 61 + 1.

The vehicle complies with European directive 2001/85/EEC.

Comfortable coach seats with luxury upholstery.

Grab handles on all seat backs.

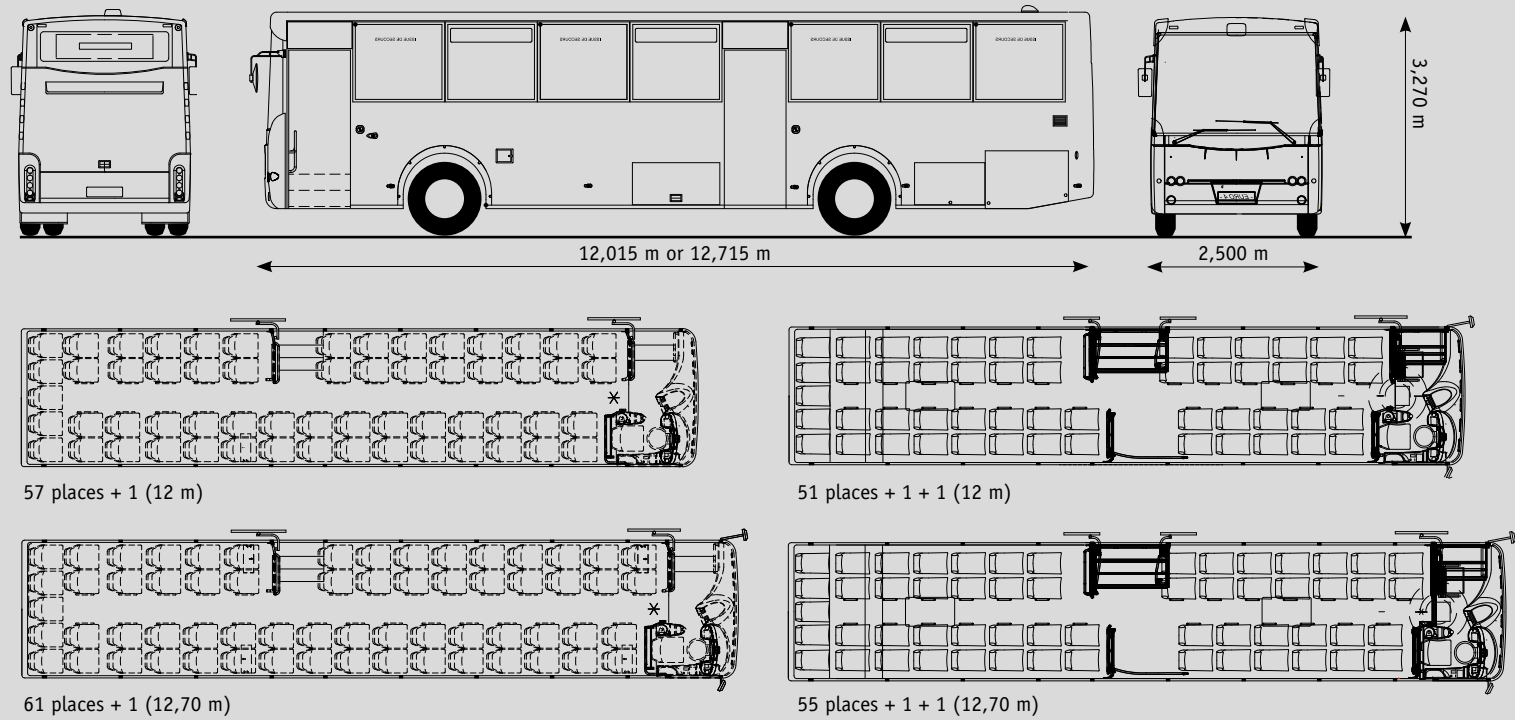
Adjustable armrests on aisle side.

Standard 3-point belts to all seats.

Standard hard plastic protection on seat backs (anti-vandalism).

## BODY STRUCTURE

- **STRUCTURE AND PANNELLING:** Chassis beams with cross sections for the chassis. Tubular frame for upper structure, galvanised steel and coated with epoxy paint. Stainless steel panelling.
- **ACCESS:** Pneumatically operated front and mid entrance door, outward swing type door. Entrance width 900 mm.
- **DISABLED ACCESS:** double mid-doors, standard with pre-disposition of disabled lift. Low cost low entry wheel chair access at mid door as option. Cassette type lift in combination with double mid door as option.



## TECHNICAL - MAN CHASSIS

### • ENGINE:



MAN D 0836 LOH 56, EURO 4 using EGR, 4-stroke common-rail Diesel, 6 cylinders in line, placed vertically behind the rear axle, turbo + intercooler, engine volume: 6.871 litres, EDC Common Rail injection. Maximum power: 177 kW / 240 hp at 2,300 min-1

280 hp version can be delivered as an option. NO AdBlue needed.

Maximum torque: 925 Nm from 1,200 min-1 to 1.800 min-1; 280 hp version: 1,100 Nm from 1,000 min-1 to 1,650 min-1

Optional: Engine: MAN D 2066 LUH 22, EURO 4 using EGR, 4-stroke common rail, Diesel, 6 cylinders in line, placed horizontally behind the rear axle, turbo + intercooler, engine volume: 10.518 litres, EDC Common Rail injection. Available in 310 or 350 bhp

### • GEARBOX:

fully automatic gearbox ZF 6HP 504 (Optional: fully automatic gearbox Voith DIWA 854.5 (integrated retarder)

### • FRONT AXLE:

MAN, type V9-82 L

### • REAR AXLE:

MAN, type HY 1336 B

### • SUSPENSION:

Front: full air suspension using 2 air bellows + 2 shock absorbers

Rear: full air suspension using 4 air bellows + 4 shock absorbers

Vehicle is equipped with front and rear height adjustment system

ECAS – electrically controlled

ZF 8098, hydraulically assisted

### • STEERING:

### • BRAKES:

front and rear ventilated disc brakes, pneumatically operated,

ABS Anti Lock Braking system + ASR Traction Control system (EBS)

### • RETARDER:

ZF Intarder, equipped with hand and foot controls

### • FUEL TANKS:

Capacity: 2 X 220 litres (440 litres in total)

Equipped with heated fuel line

### • TYRES:

Michelin 295/80 R 22.5 for medium distances

### • ELECTRICAL SYSTEM:

24 Volt System

2 batteries with a capacity of 12 V – 225 A/h

Alternators: 2 X 110 A / 24 V

### • PNEUMATIC SYSTEM:

Air drier with integrated pressure regulator

External (service) connection to fill up the system



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