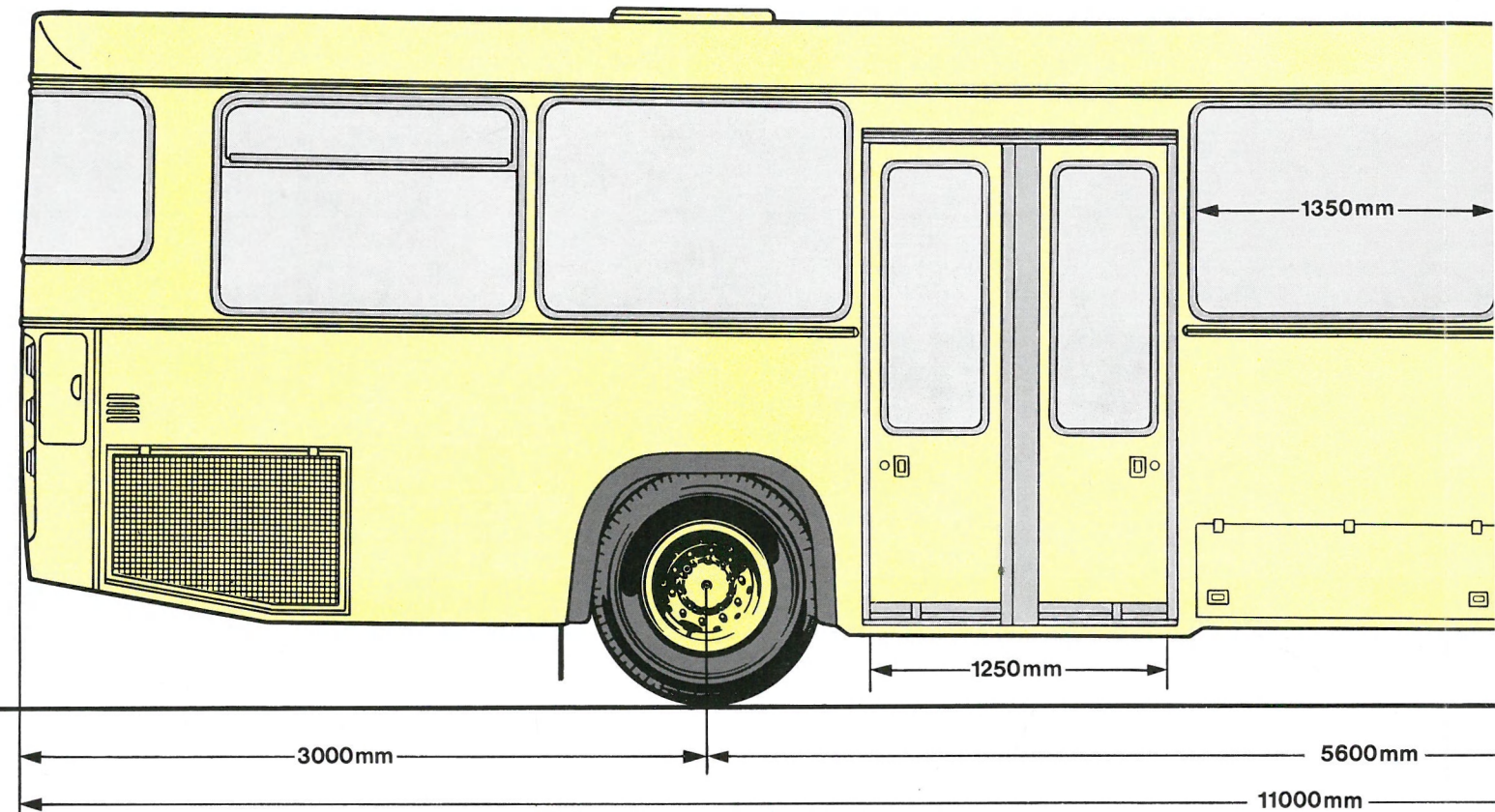


M·A·N
SL 200

Standard City Service Bus





Engine

M.A.N. diesel M engine D 2566 MUH. 6-cylinder in-line engine, rear-mounted, horizontal underfloor arrangement. Water-cooled, low-noise design. Direct fuel injection. Easily replaceable wet cylinder liners. Large rear flap. Rear-mounted radiator, electromagnetically controlled fan.

Low polluting: on account of the M.A.N. 'M' system and the reduction of the engine rating to improve the exhaust gas composition.

Rating:
155 kW (210 HP) DIN reduced to 141 kW (192 HP) DIN at 2100 rpm

Max. torque:
696 Nm (71 kpm) at 1400 rpm
Bore/stroke: 125/155 mm
Piston displacement: 11,413 cc
Compression ratio: 18:1
Starter: 24 V, Max. 6.5 kW (8.8 HP)
Starter interlock relay
Alternator: BO T1 28 V/85 A (2.38 kW)

Overvoltage protection

Batteries:
2 × 12 V/143 Ah on turntable
Battery main switch

Air compressor: 300 cc single-cylinder, water-cooled, driven by timing gears

Fuel tank

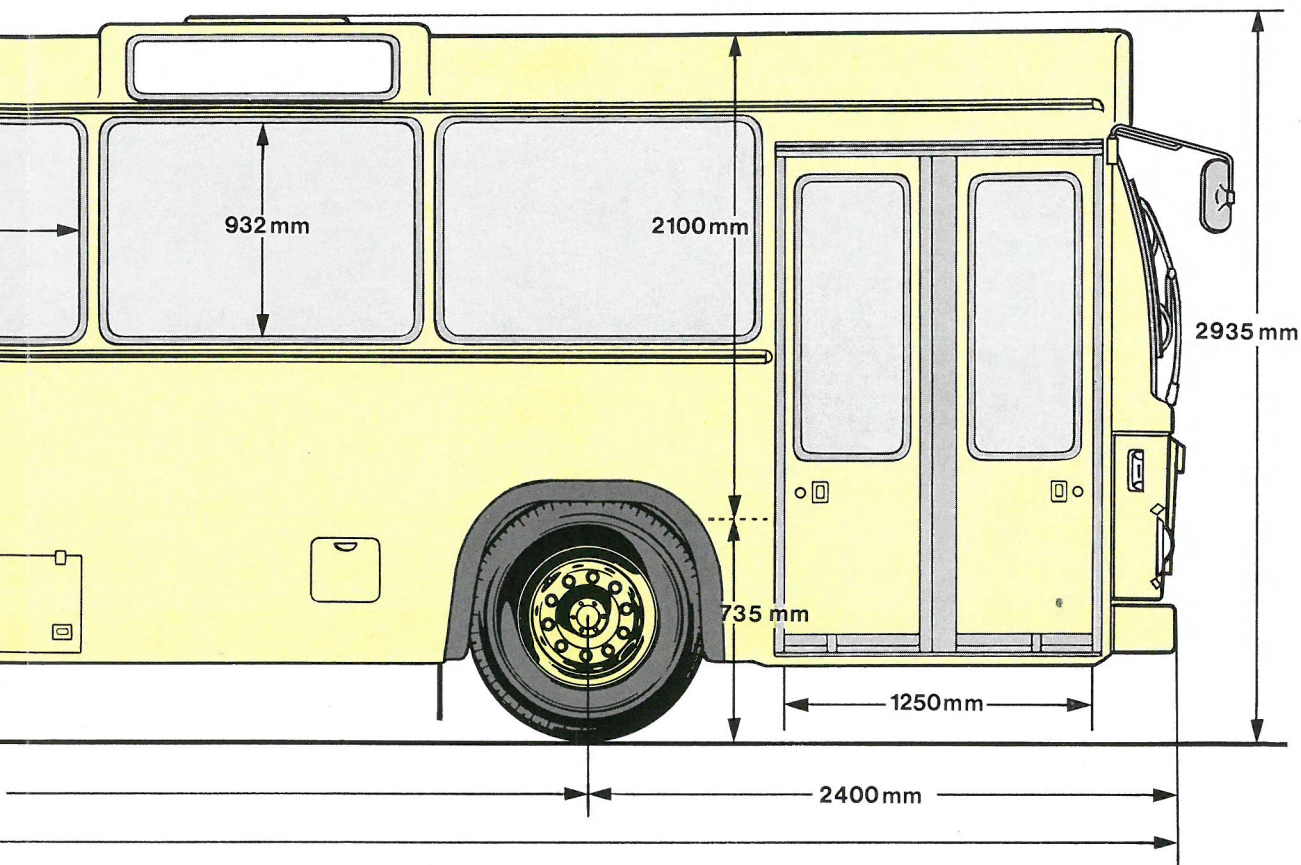
200 litre, with Bartelt snap closure, situated on the right between the axles. Filled through a flap on the right. Fuel pipes made of plastic.

Weights/Dimensions

Max. perm. front axle load	6,000 kg
Max. perm. rear axle load	10,000 kg
Max. permissible g.v.w.	16,000 kg
Track circle	17,712 mm
Turning circle	approx. 21,245 mm
Parking area	27,50 m ²
Useful area	approx. 21.00 m ²
Standing area (59 standing places)	5.90 m ²
Step height (1st step)	335 mm
Step height (2nd and 3rd step)	each 200 mm

Ratios, speeds, gradeability

Gradeability in % in altitudes up to 500 m above sea level												
Speeds in km/h												
Gear ratio	S 4-90	max. engine speed			max. torque			design 30 %				
		4.64	5.22	5.94	4.64	5.22	5.94	4.64	5.22	5.94		
1st gear	4.17	20.8	18.5	16.2	13.9	12.3	10.8	13.5	15.3	17.6		
2nd gear	2.40	36.1	32.1	28.2	24.1	21.4	18.8	7.2	8.3	9.6		
3rd gear	1.50	57.8	51.4	45.2	38.5	34.2	30.1	3.9	4.6	5.5		
4th gear	1.00	86.7	77.0	67.7	57.8	51.4	45.2	1.9	2.5	3.1		
Reverse	3.60	24.2	21.5	19.0	16.4	14.5	13.7	11.5	13.2	15.3		



Substructure

Clutch

hydraulically actuated FS single-plate dry clutch GF 420 KrW2.

Gearbox

ZF synchroma gearbox S 4-90 with rotary selector stick change.

Steering system

ZF recirculating ball hydro steering 8065 with pressure tap.
Two-spoke steering wheel, 550 mm dia.

Axles

Front: independent wheel suspension, oscillating axle with trapezoidal tie rods.

Rear: M.A.N. planetary drive axle. Rigid axle with spiral bevel gear in centre housing and planetary final drives in wheel hubs. Axle location system with torsion frames, suspension arms and torque rods.

Suspension

Air suspension with 6 identical rolling seals; 1 front and 2 rear level control valves. Constant entry height and spring characteristics under all load conditions. 2 shock absorbers front, 4 rear.

Brakes

Two-circuit air brake system acting on all wheels.

Service brake: diaphragm brake cylinders on front wheels; two double brake cylinders on rear wheels. Automatic slack adjuster.

Parking brake: linkage-less, with spring-type brake actuators. Emergency release valve for spring-loaded cylinder, in steering column bracket.

Engine brake: exhaust brake, actuated by means of brake treadle valve with cut-out control in dashboard.

Wheels/tyres

10 hole disc wheels 7.5-20"
6 × 10.00-20". Single tyres front, twin tyres rear. Front wheels balanced, with wheel nut guard rings at front. Rear wheels with inflation assistance.

Filler necks

All service points are easily accessible from outside through flaps.

Bodywork

Self-supporting grid-type construction. The substructure assembly forms one unit with the other constructional elements. The skeleton, made of high grade tubular steel, is electrically welded. Panelling of 1 mm sheet steel. The anti-corrosion protection and insulation are based on the most modern techniques. The side walls and wheel arches, for example, are made of galvanized sheet steel, the side-walls are soundproofed. The substructure skeleton foamed out. Underseal.

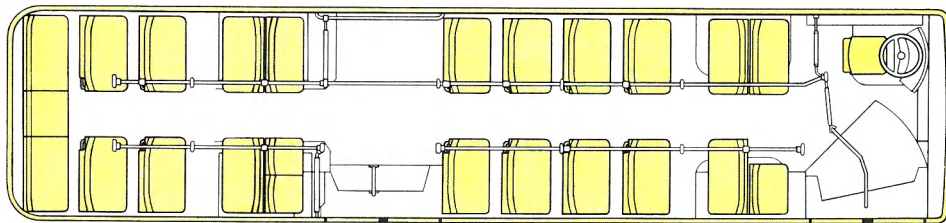
Paintwork

High-quality stoving enamels, in one colour. Two-tone colour scheme as optional extra.

Fitments

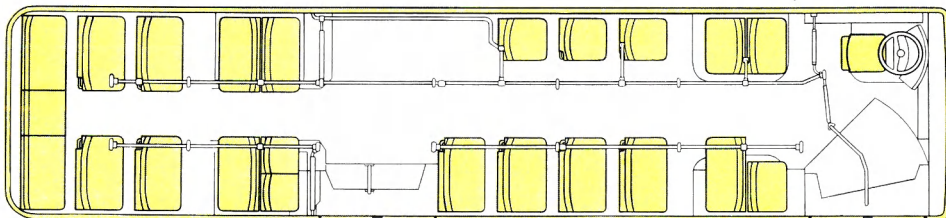
Glazing

Single pane safety glass. Driver's sliding window with tinted top light.



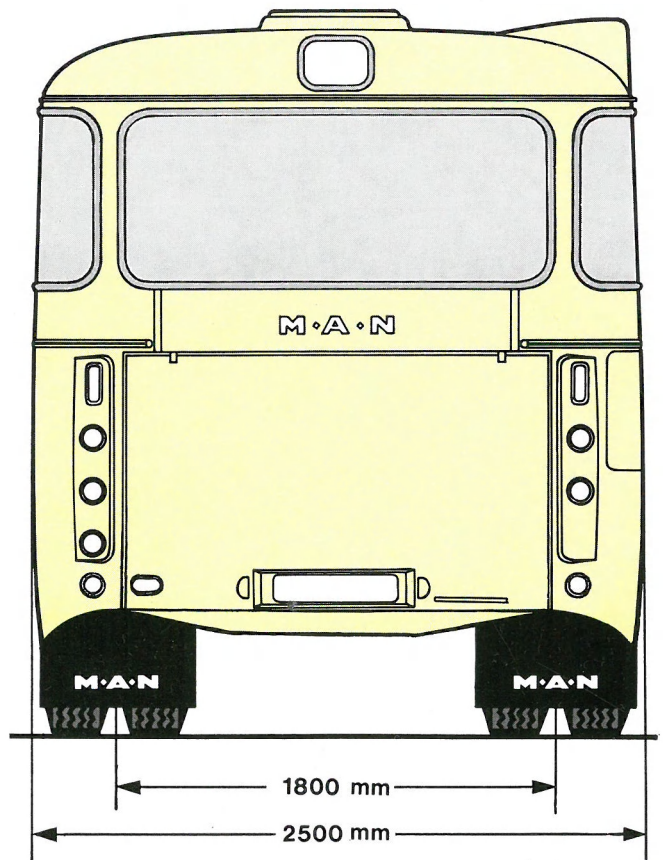
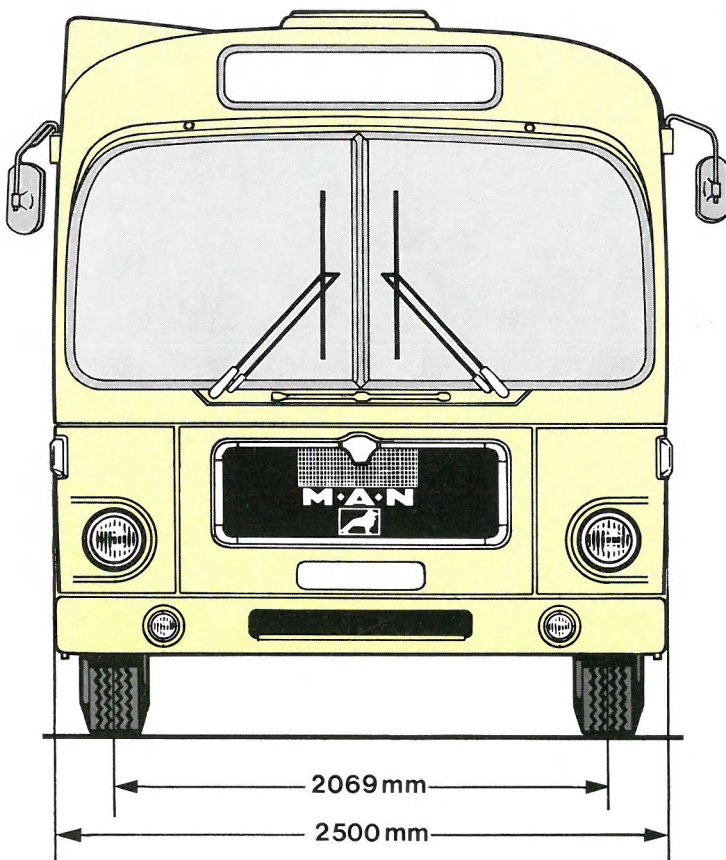
44 seats
interval between
seats = 700 mm
+ 59 standing places

103 passengers + driver



Variant
37 seats
+ 78 standing places

115 passengers + driver



Doors

Air-operated, inward swinging doors. 1 double width in front of the front axle and in front of the rear axle respectively. Hand-operated emergency controls. Doors illuminated from above. Concealed push-button at front, to operate the front door from outside.

Destination plates

1 combined destination box above the windscreen and on the right above the 2nd window in the roof. 1 rear number box, 3 roller band devices without bands.

Mirrors

2 removable outside mirrors, 1 inside mirror at the front, 1 counter mirror.

Floor and floor coverings

Floor made of impregnated plywood. Floor covering smooth, non-skid, welded seamlessly and swept up at the sides to the seat support rails. Wheel housings corrugated.

Interior panelling

Plastic grain of wood panels, various colours.

Driver's seat

Body-moulded FA-416-1 VÖV driver's seat. Height and position both adjustable. Dralon velvet covering. Side

sections and back section of backrest made of imitation leather.

Passenger Seating

Standard seating. Artificial leather covering in many colours. Back rests with chin protectors.

Ventilation

1 driver's sliding window. 1 Klimator at front, for fresh air and air circulation. 2 sky lights, 2 bottom-hinged windows in the rear side windows.

Heating

Hot water heating. Klimator. Air capacity 860 cu.m. per h. Heating capacity max. 14,000 kcal per h. 1 heat exchanger, air capacity 310 cu.m. per h., heating capacity 4,800 kcal per h. 1 Webasto cooling water preheater DBW 2020, 20,000 kcal per h., with time switch. Fuel from the 200 litre main tank. 2 heater shut-off valves.

Standard equipment

2 Halogen fog lamps mounted in the front bumper – 10 vibration-proof lamps. 1 vibration-proof lamp for the driver's station – 4 ceiling loudspeakers without amplifier, foot switch near pedals – passenger signal system with transparent "Bus stop" sign, control lamp with single tone bell near driver – 12 signal buttons in the stanchions – tachograph TCO 15/2/100 km/h – warn-

ing flasher system – two-speed windscreen wipers – windscreen washer system – 1 fire extinguisher – 2 first-aid boxes – shock and scratch-resistant hand rails and seat frames. SL or SÜ front – laminated glass windscreen.

Special equipment

Engine shroud – upswept exhaust stack – automatic gearbox – spare wheel – fully automatic central lubrication – cooling water level indicator – load-sensitive brake power regulator – Trilex wheels for normal and tubeless tyres – mechanical or electrical tachograph with rev. counter or contactor – 4 transistorized lights in accordance with VÖV guidelines – loudspeaker system – amplifiers – preparation and installation of radio systems – destination boards, semi and fully automatic destination roller band apparatus – door safety devices operated by swing and press rods, pressure-sensitive matting or magic eyes – Durofal or bucket seats – swivelling VÖV driver's seat – fare collection desk, ticket dispenser and stamping equipment – additional circulating air heaters.

Scope of delivery

In addition to complete SL 200 buses are also supply semi-finished buses and SL 200 substructures.

Bus operators and public bus services give high notes to M.A.N. buses because these vehicles are of technically-matured and future-oriented design. M.A.N. stands for quality, performance, economy and safety. Quality because M.A.N. buses are built with utmost care and tested under severe conditions. Performance because M.A.N. buses develop the required horsepower. Economy because of the optimum relation between overall performance and total cost. Safety because safe buses are a matter of course for M.A.N.

M.A.N. buses feature low-emission combustion because they are equipped with M.A.N. engines with stepped, spherical combustion chambers.

M.A.N. does still more for environmental protection. M.A.N. supplies buses

with low-noise engines, buses with LNG-fuelled engines and battery-powered motors. M.A.N. builds a complete line of standard buses: standard city buses, standard intercity buses, standard double-deckers, standard articulated buses. M.A.N. has buses for excursions as well as medium and long-distance tours.

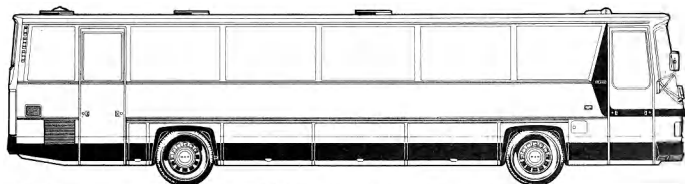
M.A.N. buses are synonymous with experience and success.

M.A.N. buses are built at Penzberg and Watenstedt. They are built by bus fitters who are well-versed in this trade and have specialized in buses exclusively.

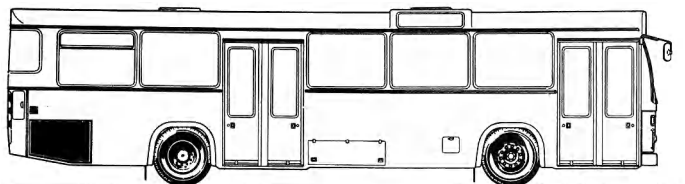
But M.A.N. attaches great importance also to after-sales service. Customers know that they are Number One in M.A.N.'s workshop, with service commercial vehicles only.

M·A·N

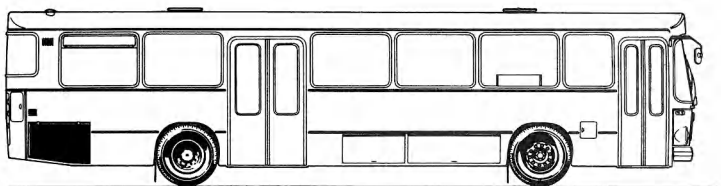
SL 200



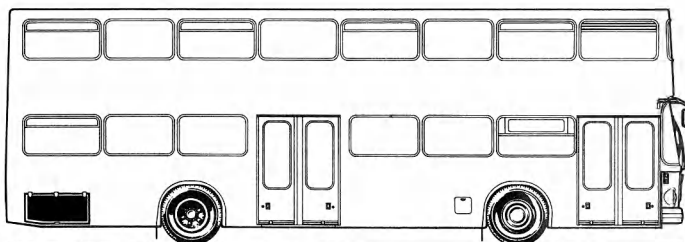
Buses for excursions, tours and longdistance tours, substructure alone also available.



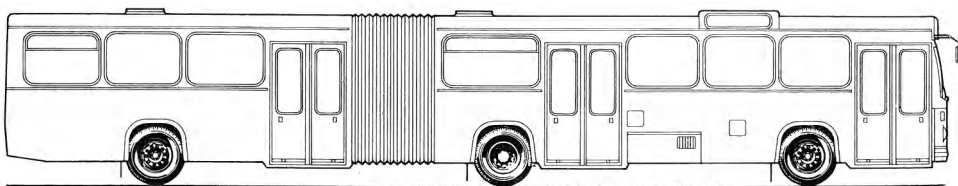
Standard service bus, substructure alone also available.



Standard intercity bus, substructure alone also available.



Standard double-decker, substructure alone also available.



Standard articulated bus, substructure alone also available.

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