



# SB 220 GG

## LOW FLOOR

### LPG

#### UK Sales specification

<b>Engine</b>	<b>8,65 l LPG horizontal 170 kW</b>
	<b>EURO 2</b>
<b>Suspension</b>	<b>Full air suspension</b>

#### Weights in kilograms

Tyres	Load index	Remark	Gross Vehicle Weight (GVW)			Chassis Weight		
			front	rear	total	front	rear	total
275/70 R 22.5	148/145J	Max techn. speed 80 km/h	6.500	11.600	18.100	1.500	4.300	5.800
275/70 R 22.5	148/145J	Plated weight (max. 100 km/h)	6.000	10.500	16.500			

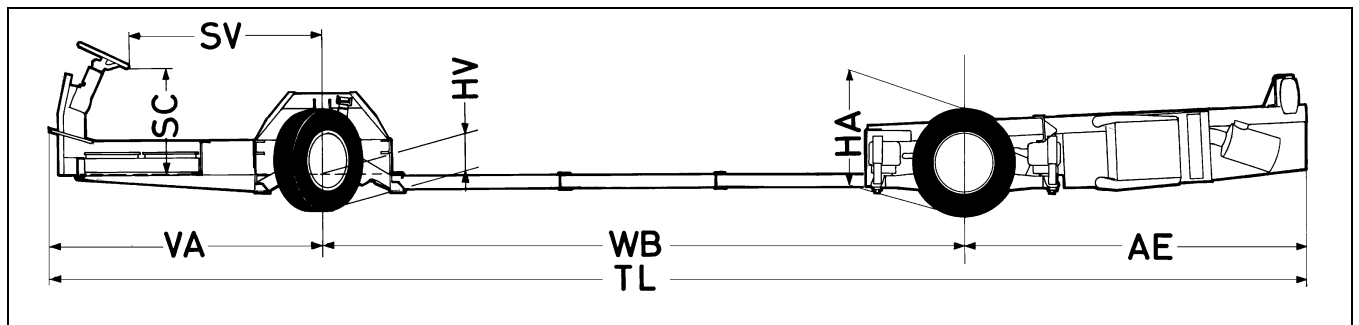
#### Weights calculated with:

Engine GG 170 LPG, automatic gearbox, 2 empty LPG-tanks, without spare wheel.

Without transport equipment. Weight tolerance  $\pm 3\%$ . These weights vary in production and are intended as a guide only.

#### Dimensions in metres:

WB	TL	VA	SV <sup>1</sup>	SC	HV	HA	TB <sup>2</sup>	AE
6.00	11.57	2.56	1.80-1.91	0.98-1.15	0.34	0.84	2.41	2.97



#### PERFORMANCE

Vehicle speed in km/h at maximum power (engine 2000 rpm) with 275/70 R 22.5 tyres.

gear box / axle ratios	3.31	3.73	4.10	4.56	5.13
4HP500 (3.43 - 1.00:1)	107	96	87	78	69
5HP500 (3,43 - 0.83:1)	---	113	103	93	84
D851.3(5.20 - 1.00:1)	107	96	87	78	69
D854.3(5.20 - 0.73:1)	---	---	117	105	95

Note: Speedlimiter mandatory (EC 92/24) for geared speeds  $\geq 100$ km/h (62,5mph)

<sup>1</sup> Adjustable steering column

<sup>2</sup> TB: overall width, measured over driven axle

## Engine

6 cylinder LPG engine with spark plugs, turbo charged and charged-cooled, horizontally mounted behind rear axle

Emission levels	significantly better than EURO 2 (NOx < 1g/kWh) 118 x 132 mm
Bore x stroke	8,66 dm <sup>3</sup>
Swept volume	9:1
Compression ratio	electronically controlled LPG multipoint injection, 3-Way catalyst
Fuel system	pressure lubrication with gear type pump, full-flow oil filter, with oil cooler
Lubrication system	water cooling with centrifugal pump, gear driven, 1 thermostat
Cooling system	dry air cleaner, with replaceable element
Air intake system	

<b>Type</b>	<b>GG 170</b>
Max.output <sup>1</sup>	170 kW / 231 hp at 2000 rpm
Max.torque	940 Nm at 1200 rpm

## Gearbox

Electronically controlled fully automatic gearbox with foot controlled integrated retarder, automatic neutral shift at standstill and kick-down.

Standard	ZF 4HP500	(3.43 - 1.00:1)
Optional:	- ZF 5HP500	(3.43 - 0.83:1)
	- Voith D851.3	(5.20 - 1.00:1)
	- Voith D854.3	(5.20 - 0.73:1)

## Construction

Welded steering and drive units for fully integral body construction up to 12 metres in length. Chassis in Low Floor version. Including LPG tanks 2 x 300 litres.

## Cooling unit

Radiator unit with hydraulic fan drive integrated in engine compartment. Fan thermostatically controlled. Including coolant level sensor.

## Steering unit

Front axle type 154 N  
Stub axles with needle bearings, 'long life' greased.

## Driven Unit

Type 1339  
Fully floating single-reduction rear axle. Crownwheel and pinion with hypoid bevel gearing.  
Ratios see other side Performance.

## Suspension

Electronically controlled air suspension with "high speed" kneeling / ferry-lift facility (2 air bags at front and 4 air bags at rear). Adjustable double-acting telescopic shock absorbers and stabilisers on both axles.

## Wheels en tyres

7.50 x 22.5 wheels with 275/70 R 22,5 tyres. Twin wheels on driven axle.

## Steering gear

Right-hand (RHD) drive.  
Hydraulic power steering with adjustable steering column, rake: 20° - 31°, height: 80 mm. Soft grip steering wheel f 500 mm.  
Inner wheel turning angle: 56°  
Turning circle radius outer front wheel: 8.52 m

## Brake system

Air mechanical, dual circuit, air brakes with air dryer and automatic slack adjusters. Drum brakes with asbestos free linings on both axles.

Brake dimensions:	
- steering axle	420 x 150 mm
- driven axle	420 x 240 mm
Compressor	2 cylinder 440cc water cooled, 600l/min at 2000 engine rpm and 10 bar
Air reservoir	3 x 36 + 2 x 20 litres
Handbrake	by means of spring brake actuators on driven axle
Optional:	- halt brake on driven axle - ABS (Anti-lock Braking System) - ASR (Anti Wheelspin System in combination with ABS and E-gas)

## Electrical equipment

Voltage	24 V
Alternator	140 A
Batteries	2 x 200 Ah, on swing out tray
Starter	5.2 kW
Service controls in engine compartment	Operating switch front/rear; switches for engine start and stop.
Central E-panel	Central electronic panel comprising: printed circuit boards with relays and electronic control units.

## Central chassis lubrication:

Automatic central lubrication system, with grease 2 or grease 00.

## Throttle control:

Electronic throttle control (E-gas), with integrated speedlimiter and throttle interlock.

## Instruments and controls:

The Coach version instrument panel is suitable for integration in the body fascia.

### Instruments:

Speedometer (km/h + mph), electronic rev.counter, gauges for: air pressure (with audible signal), fuel level, voltage, oil pressure (with audible signal), coolant temperature engine (with audible signal), retarder oil temperature.

### Switches:

Main switch, contact/stop, start, instrument panel lighting (2 intensities), reverse conformation switch, retarder on/off, fog lights front and rear, headlamp switch, air suspension height adjustment switches, hazard warning lights. optionally: contact, starter and stop switch integrated within steering lock.

### Multi-function switch:

Direction indicators, horn, headlamp main-beam / dipped-beam, headlamp flasher.

Windscreen wipers (2-speed), intermittent wipe / wipe-wash.

### Indication lights:

Central alarm light, central warning light, main switch, glowing system, headlights main/dipped beam, fog lights rear, direction indicators, parking brake, retarder oil temperature, gearbox control (Voith), retarder on/off. Optional: halt brake, central lubrication system.

### Standard Warning System (SWS) panel:

Warning lights for engine compartment temperature with audible signal, oil pressure (with audible warning), coolant temperature and low coolant level engine (with audible warning), battery charge, alternator voltage, chassis level, open doors, air filter exchange.

Optional: ABS, speedlimiter.

### Accessories:

Cigar lighter/inspection lamp socket.

## Further Equipment:

Optional:	- automatic sump topping-up system - off side fill and dip facility - tachograph, 2 drivers without rev. registration, km/h + mph
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<sup>1</sup> ECE R24-03 (ISO 1585)