# VOLVO ELECTRIC CONCEPT BUS

**FAST CHARGE, 10.7 m, CENTER DRIVER POSITION**

<table>
<thead>
<tr>
<th>Overall dimensions</th>
<th>4x2, 10.7 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Overall length (mm)</td>
<td>10720</td>
</tr>
<tr>
<td>B Overall width (mm)</td>
<td>2550</td>
</tr>
<tr>
<td>C Overall height (mm)</td>
<td>3298</td>
</tr>
<tr>
<td>D Wheelbase (mm)</td>
<td>7000</td>
</tr>
<tr>
<td>G Front overhang (mm)</td>
<td>1212</td>
</tr>
<tr>
<td>H Rear overhang (mm)</td>
<td>2508</td>
</tr>
<tr>
<td>O Approach angle (°)</td>
<td>&gt; 8.5</td>
</tr>
<tr>
<td>P Departure angle (°)</td>
<td>&gt; 7.5</td>
</tr>
<tr>
<td>Turning radius (outer front corner) (mm)</td>
<td>11200</td>
</tr>
<tr>
<td>Turning radius (outer front wheel) (mm)</td>
<td>10300</td>
</tr>
<tr>
<td>Overall height, approach and departure angles with tyres</td>
<td>275/70 R22.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weights</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted front axle load (kg)</td>
<td>7100</td>
</tr>
<tr>
<td>Permitted drive axle load (kg)</td>
<td>11500</td>
</tr>
<tr>
<td>Permitted GVW (kg)</td>
<td>18000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical motor</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Output, max (kW)</td>
<td>155</td>
</tr>
<tr>
<td>Torque (Nm)</td>
<td>400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmission and axles</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gearbox</td>
<td>Volvo 2-Speed Automated Manual Transmission</td>
</tr>
<tr>
<td>Front axle</td>
<td>Volvo RFS-L</td>
</tr>
<tr>
<td>Rear axle</td>
<td>ZF AV132</td>
</tr>
<tr>
<td>Differential lock</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steering and suspension</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering wheel side</td>
<td>Center position</td>
</tr>
<tr>
<td>Power steering</td>
<td>Electric driven hydraulic steering</td>
</tr>
<tr>
<td>Kneeling</td>
<td>Standard</td>
</tr>
</tbody>
</table>
### Charging system
- Volvo Opportunity Charging
- Roof mounted interface for conductive charging
- Fully automatic fast charging sequence
- Fast Charge interface installed on roof above 1.2 m rear of front axle

Fast Charge time: 6 min/10 km range  
Fast Charge power: up to 300 kW  
Maintenance charging (400 VAC): 4 h/day

### Energy storage system
- Lithium-ion battery  
- Water cooled

**Voltage:** 600 V  
**Capacity:** 4 x 19 kWh

### Cooling system
- Electrically driven fans with improved speed control
- No coolant filter
- Coolant level warning in instrument cluster

### Tyres and rims
- Steel rims available
- 7.5 x 22.5"
- Tyres: 275/70 R22.5

### Air and brake system
- Volvo disc brakes
- Electronic Braking System (EBS 5)
- Anti-lock Braking System (ABS)
- Acceleration Slip Regulation (ASR)
- Brake blending
- Hill start aid
- Brake temperature warning
- Poor brake performance warning
- Door brake
- Brake assistant
- Lining wear sensing and analysis
- Automatic calibration after brake pad change
- Compressed air system can easily be filled from external circuit

### Exterior and structure
- Volvos patented lightweight aluminium body concept
- Front and rear wall in composite material and ABS elements
- Double tinted glazing
- Multilayer exterior paint finish
- Easy repair of minor damages
- Parts commonality between city and intercity buses to lower maintenance cost
- Anti-corrosion treatment of underbody with conservation sealing and silencing agents
- LED lights
- Daytime running lights
- Cornering lights and auxiliary lights as option
- Electrically adjustable and heated external mirrors

### Doors and door system
- Electric door system
- Double glazing in all doors
- Electric sensitive edge for increased passenger safety
- Extra wide doors for easy entry and exit

### Climate system
- Roof mounted HVAC unit (Heating, Ventilation and Air Conditioning)
- One AC unit for both passenger and driver climate zones
- Driver’s compartment with AC
- Separate climate zones for driver and passengers
- Pipe conectors and air blowers
- Auxiliary heater

### Capacity
- **Roof heating mode:** 28 kW  
  9 kW Heat pump (Air/Air)
- **AC mode (35/40/47%)**  
  26 kW
- **Defroster:**  
  Heating GB 16 kW  
  Cooling 5.0 kW  
  Airflow 731 m³/h
- **Conectors:**  
  551 W/m at Δ temp. 60 °C
- **Auxiliary heater:**  
  Fuel (Diesel/HVO) 16 kW  
  Electric 7 kW

### Interior
- Spacious and bright
- Comfortable
- Integrated position for passenger information displays
- Interior LED lights
- Low noise level
- Skylight
- Data logging
- USB ports

### Passenger seats
- **Volvo city seats featuring:**
  - Optimised city bus seat
  - Easy maintenance
  - Fold away seats that the driver can lock in upright position
  - Volvo Service and spare parts handling

### Driver’s seat and station
- **Volvo dashboard:**
  - Dashboard moves with the steering column in height and tilt
  - Standard version (fulfilling ISO16121)
- **Instrument cluster:**
  - Speedometer
  - Power meter
  - 4.3” display
  - Indicators
  - Warning lamps
- **Data logging**
- **Alcolock**
- **Outdoor temperature meter**
- **ISRI Driver’s seat**

### Electrical system
- Automatic shut off of main switch at low voltage level

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of batteries</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>24 V</td>
</tr>
<tr>
<td><strong>Battery type</strong></td>
<td>12 V/105 Ah</td>
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</tbody>
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### Audio system
- **Stereo radio with CD player**
- **Preparation kit for radio**
- **Foot controlled public address system**
- **Amplifier adapted to city bus**