



# ZERO EMISSIONS POWERTRAINS

Product catalogue 2020/2021 >







Technical specifications

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Photos

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Driveline	Motor	
	asynchronous motor 160 kW	●
	Traction batteries	
	lithium-ion (capacity depending on specification)	●
	operation up to 24h (depending on batteries capacity and charging system)	●
	Charging system	
	plug-in	●
	pantograph	○

Chassis	Front axle	
	ZF independent suspension	●
	Drive axle	
	DANA rigid axle	●
	Central lubrication	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	Steering system	
	RB Servocom	●
	Hema	○
	Braking system	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	Suspension levelling system	
	ECAS air suspension with leveling and kneeling function	●

Bodywork	Body structure	
	stainless steel	●
	Side panels	
	removable side panels	●
	Door arrangement	1-2
	Entrance height	
	entrance height for all doors and 275x70R22.5 wheels	320 mm
	Wheelchair ramp	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	Number of passenger seats (depending on door arrangement and batteries)	max. 27

Heating, ventilation and air-conditioning	Air-conditioning in the driver's cabin	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	Air-conditioning in the passenger compartment	
	air-conditioning with electrical drive	○
	Ventilation system	
	dual-function fans	●

Electrical installation	Electrical installation	
	electrical installation based on CAN-Bus system	●

Driveline	Motor	
	asynchronous motor 160 kW	○
	asynchronous motor 300 kW (*)	●
	electric portal axle ZF AVE130 2x125 kW (*)	○
	Traction batteries	
	lithium-ion (capacity depending on specification)	●
	operation up to 24h (depending on batteries capacity and charging system)	●
	Charging system	
	plug-in	●
	pantograph	○

Chassis	Front axle	
	ZF independent suspension	●
	ZF rigid axle	○
	Drive axle	
	ZF portal axle	○
	ZF portal axle with integrated electric motors	●
	Central lubrication	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	Steering system	
	RB Servocom	●
	Hema	○
	Braking system	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	ESC (Electronic Stability Control)	○
	Suspension levelling system	
	ECAS air suspension with leveling and kneeling function	●

(\*) - Traction motor maximum power

Bodywork	Body structure	
	stainless steel	●
	Side panels	
	removable side panels	●
	Door arrangement	
		1-2-0 2-2-0 1-2-2 2-2-2
	Entrance height	
	entrance height for all doors and 275x70R22.5 wheels	320 mm
	Wheelchair ramp	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	Number of passenger seats (depending on door arrangement and batteries)	
		max. 39 + 4

Heating, ventilation and air-conditioning	Air-conditioning in the driver’s cabin	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	Air-conditioning in the passenger compartment	
	air-conditioning with electrical drive	○
	air-conditioning with CO2 heat pump	○
	Ventilation system	
	dual-function fans	●

Electrical installation	Electrical installation	
	electrical installation based on CAN-Bus system	●



Driveline	Motor	
	asynchronous motor 300 kW (*)	●
	Traction batteries	
	lithium-ion (capacity depending on specification)	●
	operation up to 24h (depending on batteries capacity and charging system)	●
	Charging system	
	plug-in	●
	pantograph	○

Chassis	Front axle	
	ZF independent suspension	●
	Drive axle	
	ZF portal axle	●
	Tag axle	
	ZF tag axle	●
	ZF tag axle with active steering	○
	Central lubrication	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	Steering system	
	RB Servocom	●
	Hema	○
	Braking system	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	ESC (Electronic Stability Control)	○
	Suspension levelling system	
	ECAS air suspension with leveling and kneeling function	●

(\*) - Traction motor maximum power

Bodywork	Body structure	
	stainless steel	●
	Side panels	
	removable side panels	●
	Door arrangement	1-2-0 2-2-0 1-2-1 2-2-1
	Entrance height	
	entrance height for all doors and 275x70R22.5 wheels	320 mm
	entrance height for all doors and 295x80R22.5 wheels	360 mm
	Wheelchair ramp	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	Number of passenger seats (depending on door arrangement and batteries)	max. 65

Heating, ventilation and air-conditioning	Air-conditioning in the driver’s cabin	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	Air-conditioning in the passenger compartment	
	air-conditioning with electrical drive	○
	air-conditioning with CO2 heat pump	○
	Ventilation system	
	dual-function fans	●

Electrical installation	Electrical installation	
	electrical installation based on CAN-Bus system	●



Driveline	Motor	
	asynchronous motor 240 kW	●
	electric portal axle ZF AVE130 2x125 kW (*)	○
	Traction batteries	
	lithium-ion (capacity depending on specification)	●
	operation up to 24h (depending on batteries capacity and charging system)	●
	Charging system	
	plug-in	●
	pantograph	○

Chassis	Front axle	
	ZF independent suspension	●
	ZF rigid axle	○
	Drive axle	
	ZF portal axle	●
	ZF portal axle with integrated electric motors	○
	Central axle	
	ZF neutral axle	●
	Central lubrication	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	Steering system	
	RB Servocom	●
	Braking system	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	Suspension levelling system	
	ECAS air suspension with leveling and kneeling function	●

(\*) - Traction motor maximum power

Bodywork	Body structure	
	stainless steel	●
	Side panels	
	removable side panels	●
	Door arrangement	1-2-2-0 2-2-2-0 1-2-2-2 2-2-2-2
	Entrance height	
	entrance height for all doors and 275x70R22.5 wheels	320 mm
	Wheelchair ramp	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
Number of passenger seats (depending on door arrangement and batteries)		max. 49 + 8

Heating, ventilation and air-conditioning	Air-conditioning in the driver’s cabin	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	Air-conditioning in the passenger compartment	
	air-conditioning with electrical drive	○
	air-conditioning with CO2 heat pump	○
	Ventilation system	
	dual-function fans	●

Electrical installation	Electrical installation	
	electrical installation based on CAN-Bus system	●



Urbino 12 hydrogen	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Driveline system	<b>Motor</b>	●
	electric portal axle ZF AVE130 2x125 kW (*)	
	<b>Hydrogen fuel cell</b>	
	70kW	●
	<b>Traction batteries</b>	
	lithium-ion	●
	<b>Hydrogen tanks</b>	
	composite tanks 5 x 312 l	●
	<b>Charging system</b>	
	plug-in	●

Chassis	<b>Front axle</b>	
	ZF independent suspension	●
	ZF rigid axle	○
	<b>Drive axle</b>	
	ZF portal axle with integrated electric motors	●
	<b>Central lubrication</b>	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	<b>Steering system</b>	
	RB Servocom	●
	Hema	○
	<b>Braking system</b>	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	ESC (Electronic Stability Control)	○
	<b>Suspension levelling system</b>	
	ECAS air suspension with leveling and kneeling function	●

(\*) - Traction motor maximum power

Urbino 12 hydrogen	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Bodywork	<b>Body structure</b>	
	stainless steel	●
	<b>Side panels</b>	
	removable side panels	●
	<b>Door arrangement</b>	1-2-0 2-2-0 1-2-2 2-2-2 2-2-0
	<b>Entrance height</b>	
	entrance height for all doors	320 mm
	<b>Wheelchair ramp</b>	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	<b>Number of passenger seats (depending on door arrangement and batteries)</b>	max. 37 + 4

Heating, ventilation and air-conditioning	<b>Air-conditioning in the driver's cabin</b>	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	<b>Air-conditioning in the passenger compartment</b>	
	air-conditioning with electrical drive	○
	air-conditioning with CO2 heat pump	○
	<b>Ventilation system</b>	
	dual-function fans	○

Electrical installation	<b>Electrical installation</b>	
	electrical installation based on CAN-Bus system	●



Trollino 12	<div><div>● standard</div><div>○ option</div></div>
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Driveline	Drive system	
	MEDCOM ANT 175-600 (IGBT) asynchronous 175 kW 6-pole motor	○
	Škoda BlueDrive (IGBT) asynchronous 160 kW 4-pole motor	○
	Kiepe IMC 500 (IGBT) asynchronous 160 kW 4-pole motor	○
	Traction batteries	
	lithium-ion batteries (capacity depending on specification)	○
	Pantographs	
	manual pantograph	●
	semiautomatic or automatic pantograph	○

Chassis	Front axle	
	ZF independent suspension	●
	ZF rigid axle	○
	Drive axle	
	ZF portal axle	●
	Central lubrication	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	Steering system	
	RB Servocom	●
	Hema	○
	Braking system	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	Suspension levelling system	
	ECAS air suspension with leveling and kneeling function	●

Trollino 12	<div><div>● standard</div><div>○ option</div></div>
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Bodywork	Body structure	
	stainless steel	●
	Side panels	
	removable side panels	●
	Door arrangement	1-2-0 2-2-0 1-2-2 2-2-2
	Entrance height	
	entrance height for all doors	320 mm
	Wheelchair ramp	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	Number of passenger seats (depending on door arrangement and batteries)	max. 39 + 4

Heating, ventilation and air-conditioning	Air-conditioning in the driver's cabin	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	Air-conditioning in the passenger compartment	
	air-conditioning with electrical drive	○
	Ventilation system	
	dual-function fans	●
	Passenger compartment heating system	
	electric 1-stage blowers	○
	water heating, electric water heater TJ40.3 (40 kW), convector-type heaters, 2-stage blowers	●

Electrical installation	Electric installation	
	electrical installation based on Can-Bus system	●



Trollino 18	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Driveline	<b>Drive system</b>	
	MEDCOM ANT 250-600 (IGBT) asynchronous 250 kW 6-pole motor	○
	Škoda BlueDrive (IGBT) asynchronous 250 kW 6-pole motor	○
	Kiepe IMC 500 (IGBT) 2-axle drive: 2 asynchronous 160 kW 4-pole motors	○
	<b>Traction batteries</b>	
	lithium-ion batteries (capacity depending on specification)	○
	<b>Pantographs</b>	
	manual pantograph	●
	semiautomatic or automatic pantograph	○

Chassis	<b>Front axle</b>	
	ZF independent suspension	●
	ZF rigid axle	○
	<b>Drive axle</b>	
	ZF portal axle	●
	<b>Central axle</b>	
	ZF neutral axle	●
	<b>Central lubrication</b>	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	<b>Steering system</b>	
	RB Servocom	●
	<b>Braking system</b>	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	<b>Suspension levelling system</b>	
	ECAS air suspension with leveling and kneeling function	●

Trollino 18	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Bodywork	<b>Body structure</b>	
	stainless steel	●
	<b>Side panels</b>	
	removable side panels	●
	<b>Door arrangement</b>	1-2-2-0 2-2-2-0 1-2-2-2 2-2-2-2
	<b>Entrance height</b>	
	entrance height for all doors	320 mm
	<b>Wheelchair ramp</b>	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
<b>Number of passenger seats (depending on door arrangement and batteries)</b>		max. 45 + 8

Heating, ventilation and air-conditioning	<b>Air-conditioning in the driver's cabin</b>	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	<b>Air-conditioning in the passenger compartment</b>	
	air-conditioning with electrical drive	○
	<b>Ventilation system</b>	
	dual-function fans	●
	<b>Passenger compartment heating system</b>	
	electric 1-stage blowers	○
	water heating, electric water heater TJ40.3 (40 kW), convector-type heaters, 2-stage blowers	●

Electrical installation	<b>Electric installation</b>	
	electrical installation based on Can-Bus system	●



Trollino 24	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Driveline

Drive system

Kiepe IMC 500 (IGBT) 2-axle drive: 2 asynchronous 160 kW 4-pole motors	○
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Traction batteries

lithium-ion batteries (capacity depending on specification)	○
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Pantographs

manual pantograph	○
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semiautomatic or automatic pantograph	●
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<b>Front axle</b>	
ZF independent suspension	●
ZF rigid axle	○
<b>Drive axle</b>	
ZF portal axle	●
<b>Fourth axle</b>	
ZF tag axle	○
ZF tag axle with active steering	●
<b>Central lubrication</b>	
central lubrication point - solid lubricating grease	●
central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
<b>Steering system</b>	
RB Servocom	●
Hema	○
<b>Braking system</b>	
EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
<b>Suspension levelling system</b>	
ECAS air suspension with leveling and kneeling function	●

Chassis

Trollino 24	<ul style="list-style-type: none"> <li>● standard</li> <li>○ option</li> </ul>
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Body structure

stainless steel	●
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Side panels

removable side panels	●
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Door arrangement

1-2-2-2-0
2-2-2-2-0
1-2-2-2-2
2-2-2-2-2

Entrance height

entrance height for all doors	320 mm
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Wheelchair ramp

wheelchair ramp at the 2nd entrance, manually operated	●
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wheelchair ramp at the 2nd entrance, electrically operated	○
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Number of passenger seats (depending on door arrangement and batteries)

Air-conditioning in the driver's cabin

air-conditioning powered by passenger compartment unit	○
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air-conditioning with electric drive	○
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Air-conditioning in the passenger compartment

air-conditioning with electrical drive	○
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Ventilation system

dual-function fans	●
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Passenger compartment heating system

electric 1-stage blowers	○
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water heating, electric water heater TJ40.3 (40 kW), convector-type heaters, 2-stage blowers	●
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Electrical installation

Electric installation

electrical installation based on Can-Bus system	●
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Driveline	<b>Drive system</b>	
	Kiepe IMC 500 (IGBT) 2-axle drive: 2 asynchronous 160 kW 4-pole motors	○
	<b>Traction batteries</b>	
	lithium-ion batteries (capacity depending on specification)	○
	<b>Pantographs</b>	
	manual pantograph	○
	semiautomatic or automatic pantograph	●

Chassis	<b>Front axle</b>	
	ZF independent suspension	●
	ZF rigid axle	○
	<b>Drive axle</b>	
	ZF portal axle	●
	<b>Central axle</b>	
	ZF neutral axle	●
	<b>Fourth axle</b>	
	ZF tag axle	○
	ZF tag axle with active steering	●
	<b>Central lubrication</b>	
	central lubrication point - solid lubricating grease	●
	central lubrication system with self-diagnostic - semi-fluid lubrication grease	○
	<b>Steering system</b>	
	RB Servocom	●
	Hema	○
	<b>Braking system</b>	
	EBS (Electronic Braking System), ABS (Anti-Lock Braking System), ASR (Acceleration Slip Regulation)	●
	<b>Suspension levelling system</b>	
	ECAS air suspension with leveling and kneeling function	●

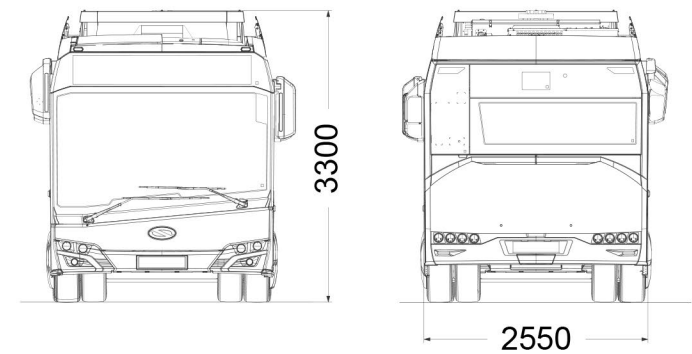
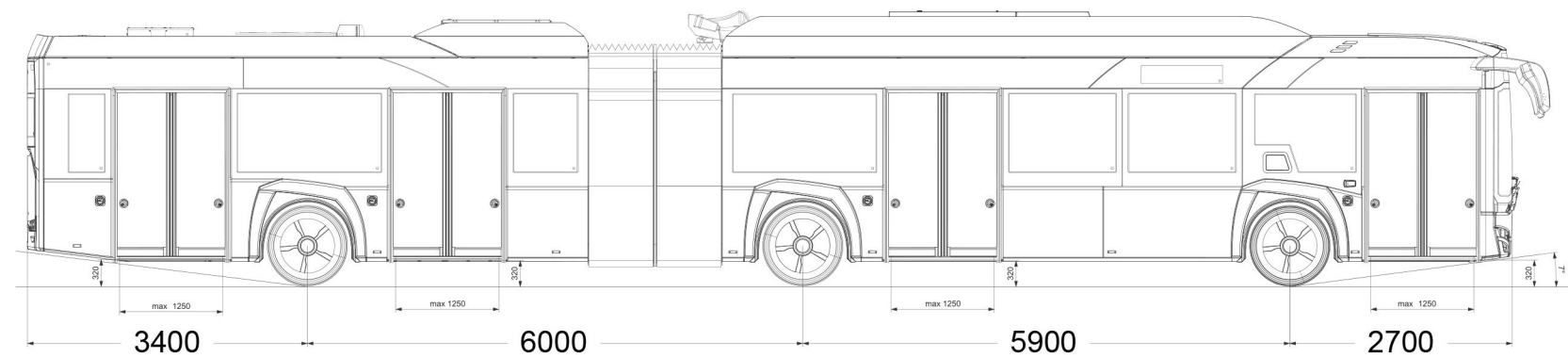
Bodywork	<b>Body structure</b>	
	stainless steel	●
	<b>Side panels</b>	
	removable side panels	●
	<b>Door arrangement</b>	1-2-2-2-0 1-2-2-2-2
	<b>Entrance height</b>	
	entrance height for all doors	320 mm
	<b>Wheelchair ramp</b>	
	wheelchair ramp at the 2nd entrance, manually operated	●
	wheelchair ramp at the 2nd entrance, electrically operated	○
	<b>Number of passenger seats (depending on door arrangement and batteries)</b>	max. 68

Heating, ventilation and air-conditioning	<b>Air-conditioning in the driver's cabin</b>	
	air-conditioning powered by passenger compartment unit	○
	air-conditioning with electric drive	○
	<b>Air-conditioning in the passenger compartment</b>	
	air-conditioning with electrical drive	○
	<b>Ventilation system</b>	
	dual-function fans	●
	<b>Passenger compartment heating system</b>	
	electric 1-stage blowers	○
	water heating, electric water heater TJ40.3 (40 kW), convector-type heaters, 2-stage blowers	●

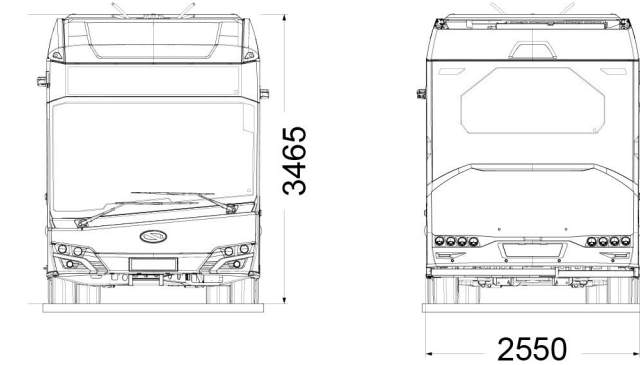
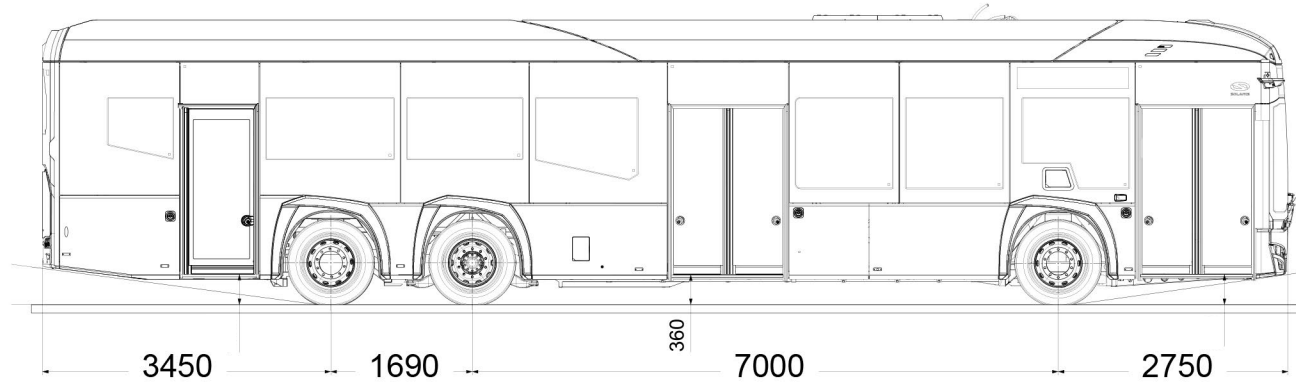
Electrical installation	<b>Electric installation</b>	
	electrical installation based on Can-Bus system	●



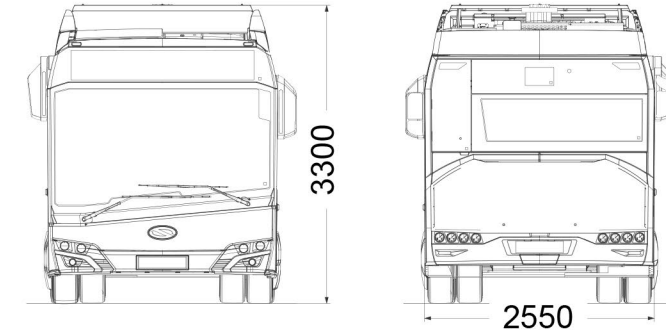
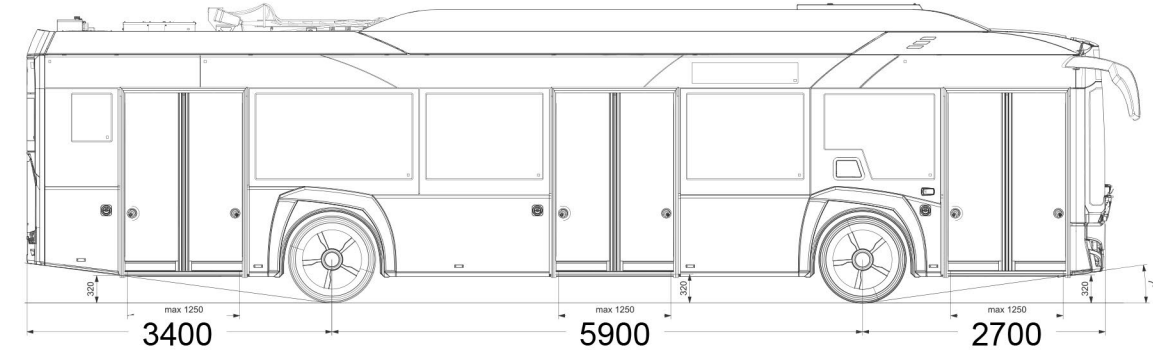
› Urbino 18 electric



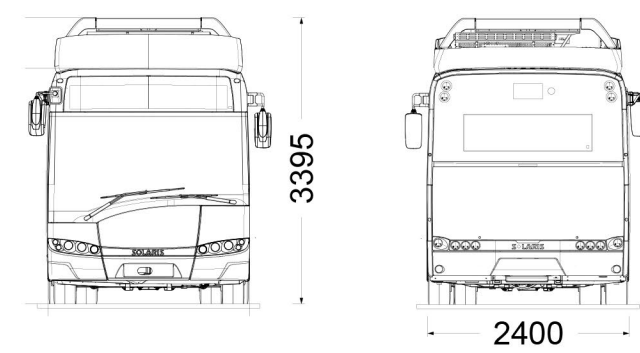
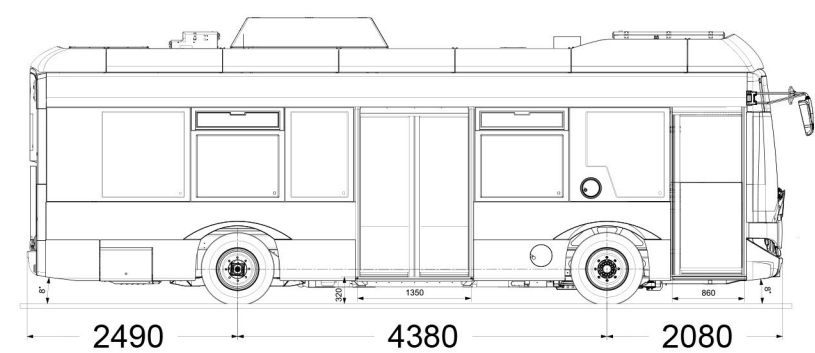
› Urbino 15 LE electric



› Urbino 12 electric

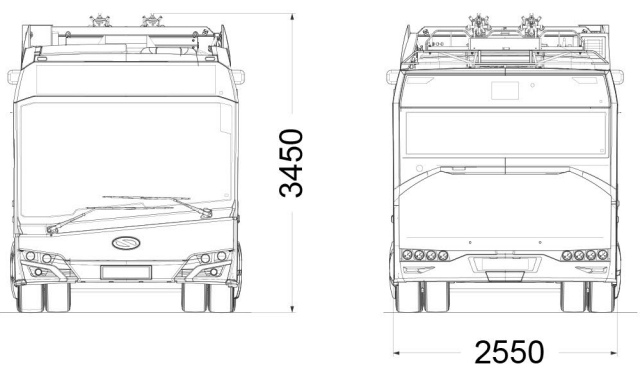
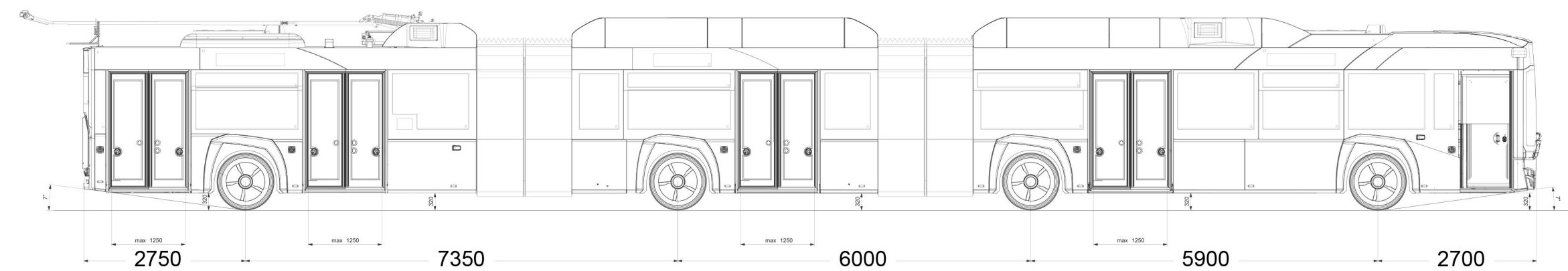


› Urbino 8,9 LE electric

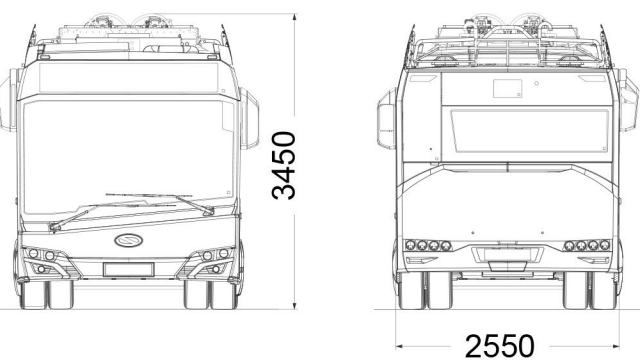
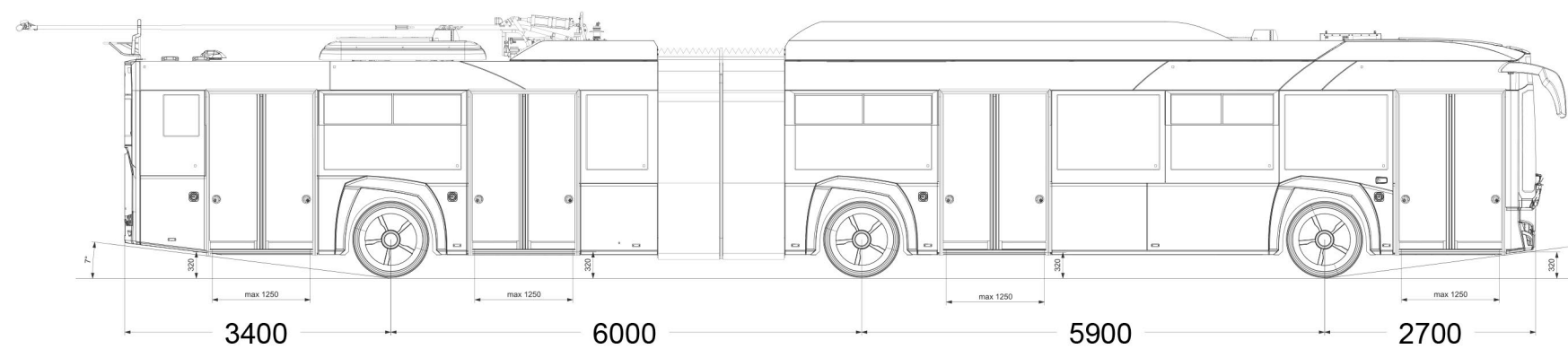




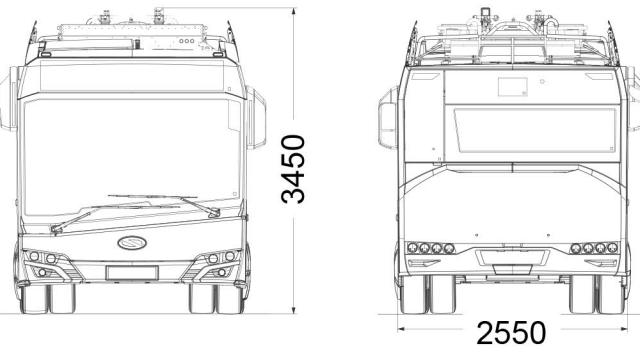
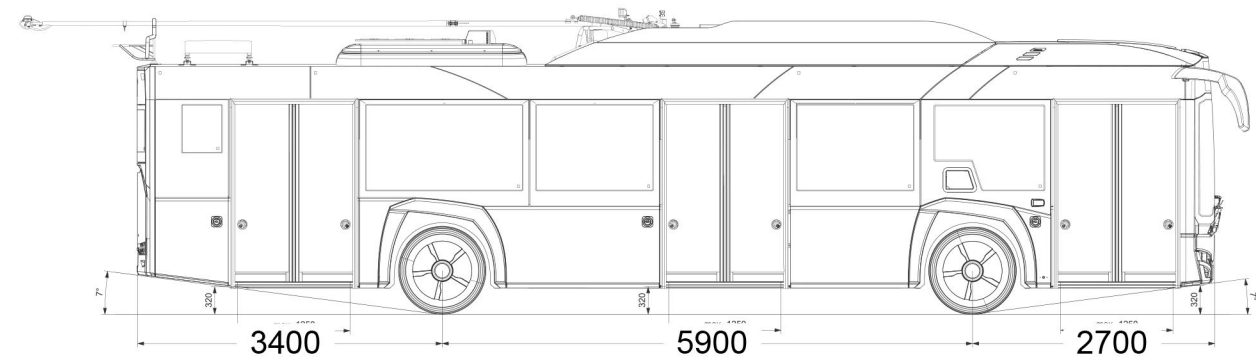
» Trollino 24



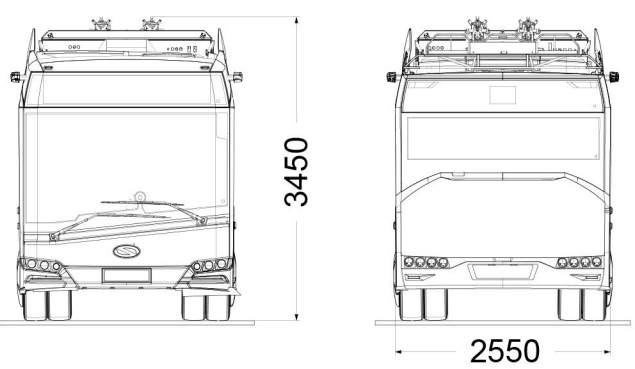
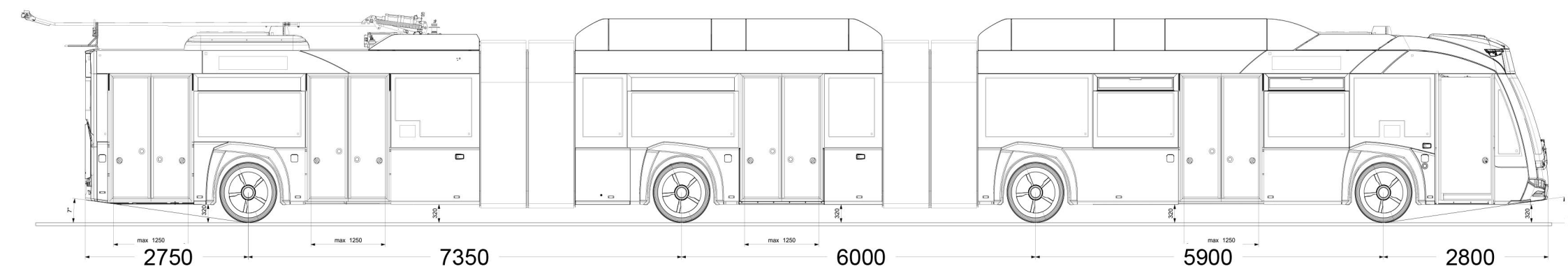
» Trollino 18



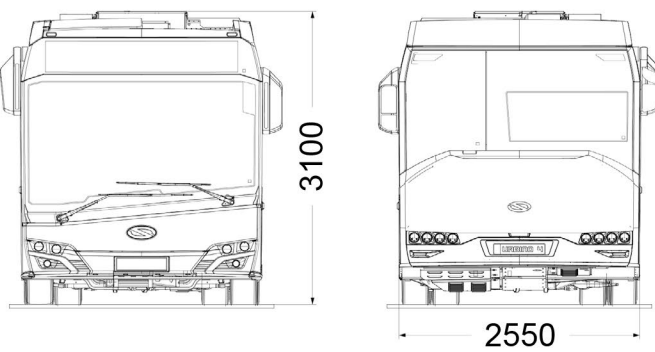
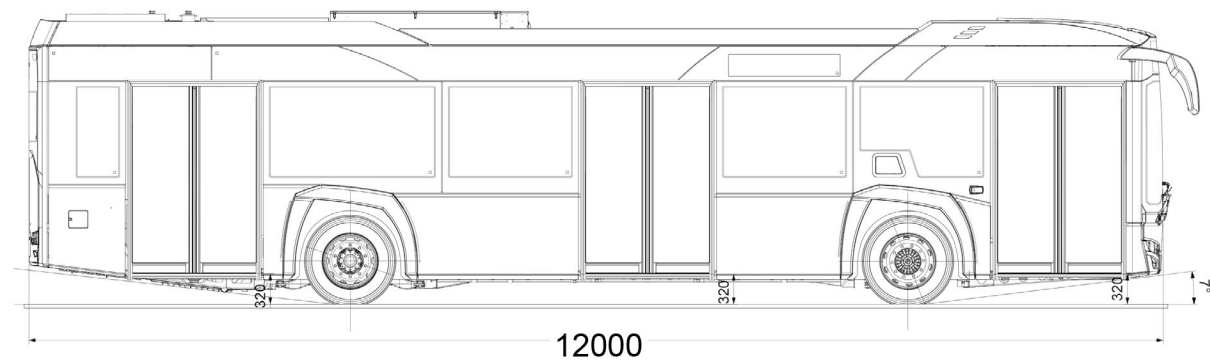
» Trollino 12



› Trollino 24 MetroStyle



› Urbino 12 hydrogen





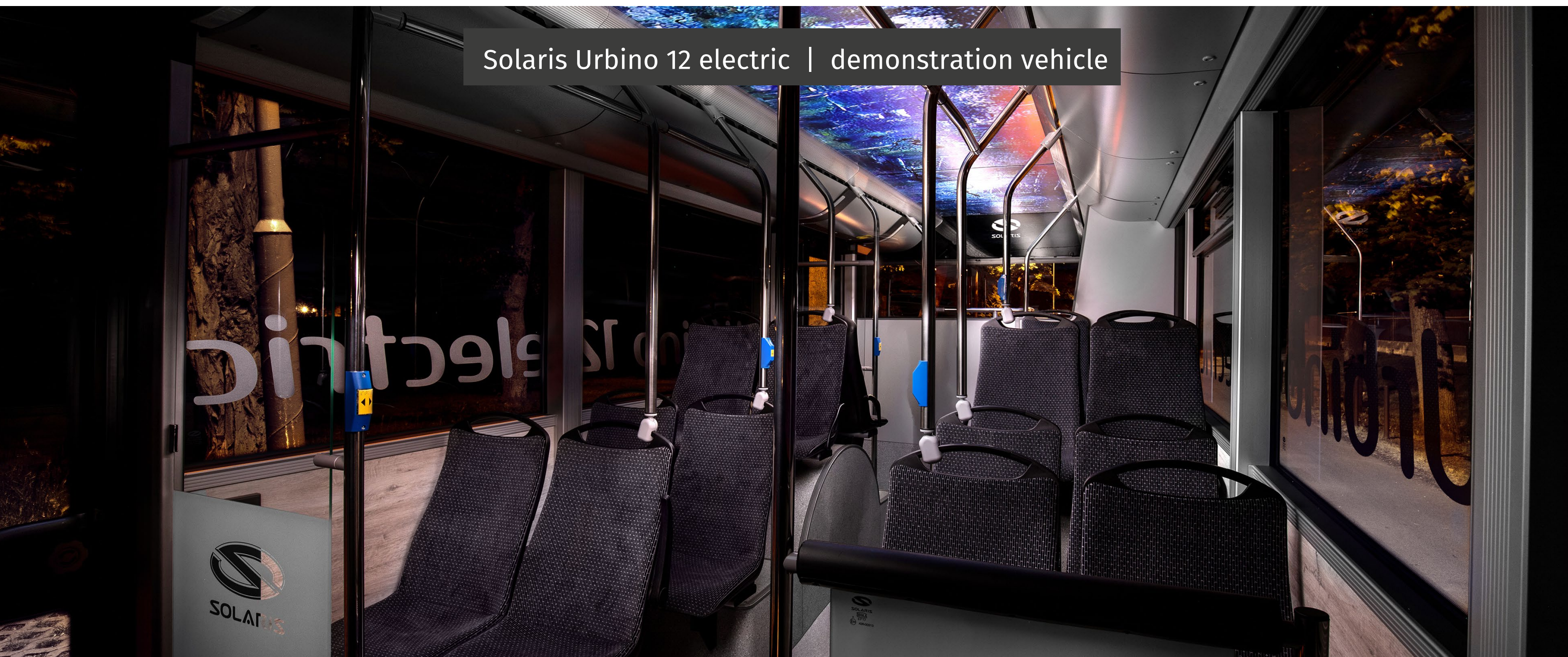
Solaris Urbino 12 electric | demonstration vehicle



Solaris Urbino 12 electric | demonstration vehicle



Solaris Urbino 12 electric | demonstration vehicle





Solaris Urbino 12 hydrogen | demonstration vehicle



Solaris Urbino 12 hydrogen | demonstration vehicle



Solaris Urbino 12 hydrogen | demonstration vehicle





Solaris Urbino 15 LE electric | demonstration vehicle



Solaris Urbino 15 LE electric | demonstration vehicle



Solaris Urbino 15 LE electric | demonstration vehicle









Trollino 12 | Gdynia



Trollino 12 | Gdynia



Trollino 18 | Bergen





Trollino 24 MetroStyle | demonstration vehicle



Trollino 24 MetroStyle | demonstration vehicle



Trollino 24 MetroStyle | demonstration vehicle



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