





BUS & COACH

DISCOVER OUR UNIQUE CITEA STORY

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WE MAKE TOMORROW'S DIFFERENCE TODAY

MOVE. TOGETHER.

The world is changing, and the mobility of people is becoming more important every day. How can we make the move to more sustainable transport together? Towards more comfort, luxury, profitability and efficiency? And towards new, smart transport solutions that go beyond just delivering buses?

At VDL Bus & Coach we have a clear vision of the future and are constantly on the move to anticipate emerging trends. This approach enables us to work with our customers to develop buses that are just as unique as their passengers and public transport solutions that meet the needs and demands of the market, today and tomorrow.

From e-mobility innovations, including complete turnkey solutions, to trusted technologies, combined with inventive features. Everything contributes to a cleaner environment, lower energy consumption and a more sustainable way of transport.

Every situation requires a different approach. That is why we offer customisation and create added value through flexible solutions for specific situations. With this approach we never stop moving and are driven to make a difference for our customers, passengers and drivers every day. We make tomorrow's difference today.

TRANSITION TO ZERO EMISSION

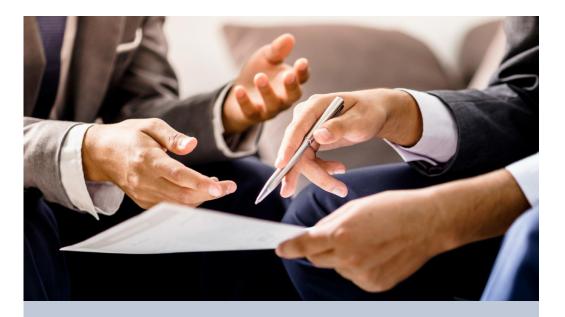
YOUR TRANSITION PARTNER

VDL Bus & Coach is the front runner in being a transition partner for many operators and local governments throughout Europe.

Whether focusing on transitioning a complete operation from diesel to electric, or on making step-by-step improvements to renew the fleet with a number of electric buses.

We are the partner for operators and local governments. Always focused on minimising the impact on the environment and improving efficiency, we work closely together with our partners and lead the transition to zero emission.

To achieve zero emission, VDL Bus & Coach has developed a special transition process to help customers. From analysis, project definition and calculation, to implementation, testing and daily operation. We support you in every way, all the way.



THE PROCESS

- Analysis of route data
 Check customer requirements
- Calculation of the operationChoice of battery, charging system and charging strategy
- Implementation management

 Defining and planning processes, production and installation
- Testing period
 Testing the complete system and training staff
- Daily operation

 Monitoring the processes, repair and maintenance







TURNKEY SOLUTIONS

Beyond being just a supplier of buses, VDL Bus & Coach is a complete system supplier. In addition to supplying buses, we also take care of the charging infrastructure, manage the project and implementation, and install, monitor, repair and maintain the entire system. We give advice during the purchase process, the operational period and also in the resale phase. We regard professional training courses, advice from experts and attractive financial solutions as the norm. The same applies to the rapid, guaranteed delivery of parts. With VDL Bus & Coach you are opting for 360° service during all phases of deployment.

MORE ABOUT TURNKEY SOLUTIONS >



TOWARDS CLEANER PUBLIC TRANSPORT

A CLOSER LOOK AT OUR CITEA RANGE

Today, the complete Citea range is increasingly being used for both crowded urban and regional transport in different cities throughout Europe and the Middle East. Produced in Western Europe, these buses, whether electric or diesel, have a flexible, modular concept that reduces noise nuisance and produces less or zero emission of harmful substances during operation. They are also attractive from an operational point of view because of their efficiency.

Whether choosing diesel or electric, VDL Bus & Coach offers the option to choose from several different length variants and drivelines. The versatility, due to the option of single leaf or double leaf doors, enables this vehicle to meet the wishes of any operator.



The Citea range enables you to implement cleaner public transport, for both electric and diesel. For the electric buses we provide different types of battery packs and charging systems. For our diesel buses, a start-stop system is available. This enables you to put together the optimal configuration for any area of operation, without affecting accessibility, interior layout or comfort.

Widely praised for its driving performance and roadholding, an ergonomically designed driver's area and a superb field of view for optimal safety are features of the Citea that drivers appreciate.



Increased profit

Low operational costs and maximum reliability

Maximum efficiency

Optimally put together for any area of operation

Highly innovative

Innovative concepts and smart drive technologies

Exceptionally practical

Obstacle-free accessibility for better passenger flow

Extremely safe

Excellent field of view, perfect handling and highly manoeuvrable





CITEA SLF / SLFA ELECTRIC >

CITEA SLE / XLE ELECTRIC >

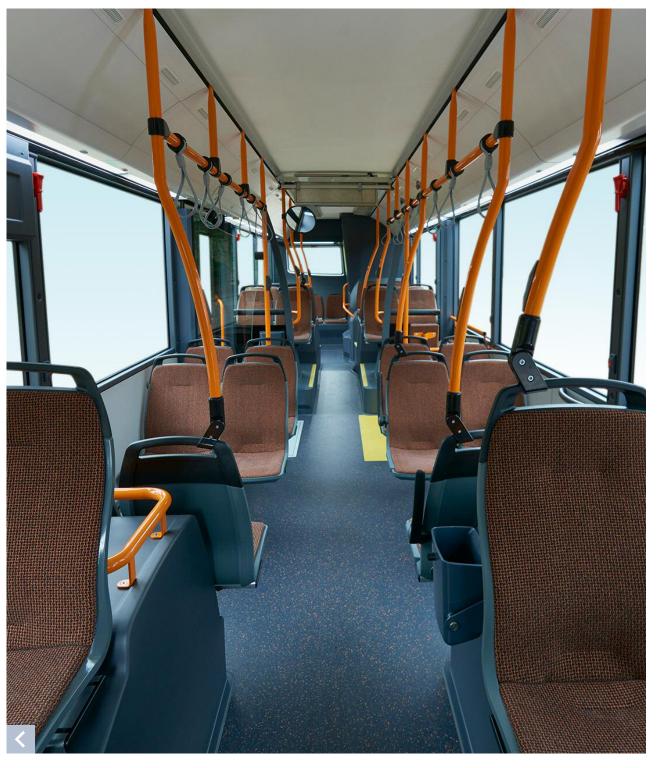
CITEA LLE ELECTRIC >

CITEA LLE DIESEL >





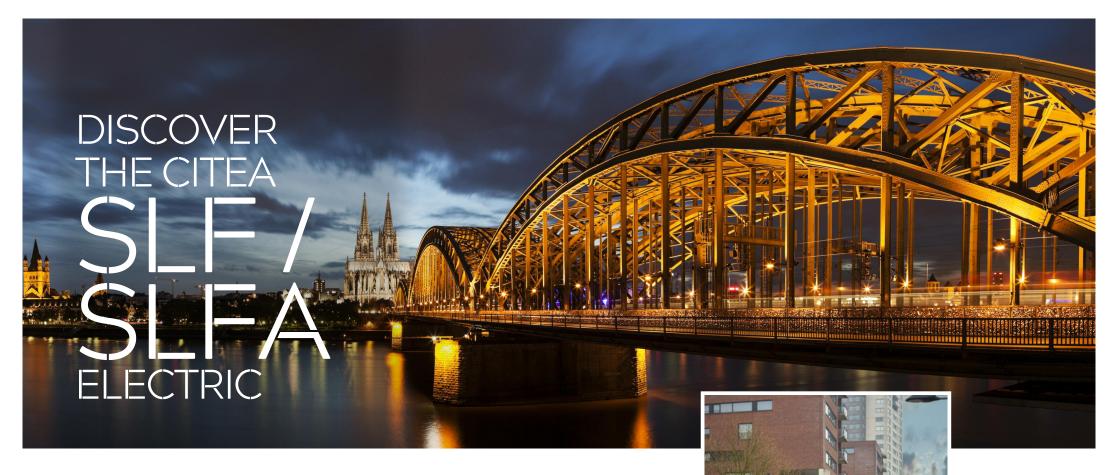
DESIGN AND FLEXIBILITY COMBINED WITHOUT COMPROMISE



DESIGNED AROUND YOUR NEEDS







A completely flat floor, a high degree of modularity, compact dimensions and great manoeuvrability make the Citea Low Floor Electric suitable for public transport in the city. Due to the wide entry and exit doors that provide an optimal accessibility, this Citea is ideal for high passenger flows with high frequencies.



The Citea SLF and SLFA Electric provides the solution for electric public transport on bus lines with high passenger flows.

The innovative character of the SLFA -181 is also visible on the outside, due to the BRT design of this articulated bus. This makes this vehicle a valuable contribution to a modern city image. At the same time, the unique design also focusses on the experience of the passengers with a fluent destination display, special designed LED lighting and closed wheelhouses. The interior design and configuration has also luxurious standing areas and special interior lighting for different ambiances.

The BRT variant of the Citea SLFA can be custom made at several aspects, with everything centred around passenger convenience. Making this model the perfect solution for cities to take their public transport to the next level.

Completely flat floor

Perfect for large passenger flows and optimal accessibility

Driving comfort

Great manoeuvrability

100% zero emission

Full electric climate system available

Fast charging

Roof and infrastructure mounted pantograph



The choice of low entry design, high degree of modularity and great manoeuvrability make the Citea Low Entry Electric suitable for both city and regional transport. It focusses on more passenger comfort and provides a spacious interior with luxurious seats and a maximum number of seating capacity. With the Citea Low Entry Electric, more zero emission deploy options are possible such as suburban and regional public transport.

Flexibility

Flexible door configurations, including a 3rd door for both city and regional transport operation

Full size low entry electric

12, 12.9 and 14.5 metres length variants

Greater comfort

Clever interior concepts for optimised passenger comfort

The Citea Light Low Entry Electric is an innovative, low weight concept for a low entry bus especially designed for the demanding conditions of urban and regional transport. Its well-thought-out method of construction results in a very low weight with major benefits such as class-leading energy consumption and low maintenance costs.

The Citea LLE Electric is equipped with a battery pack that provides a large action radius. With the optional pantograph, faster charging becomes possible, which can even enlarge the action radius.

Flexibility

For both urban and regional transport

Reliable

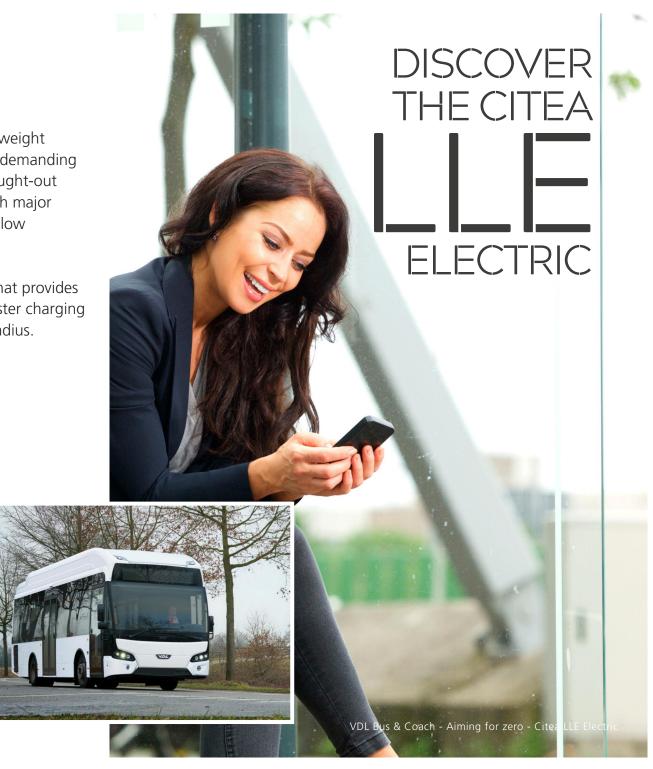
Proven, innovative low-weight concept

Greater convenience

Excellent accessibility

Modular technology

Roof and infrastructure mounted pantograph





Passenger transport companies are focusing more and more on products that match transportation needs. That is why state-of-the-art technology and construction methods are combined in the Citea Light Low Entry Diesel. The new aerodynamic design, environmentally friendly engines and lower weight result in class-leading fuel consumption and less maintenance costs. Providing customers with optimal Profit of Ownership.

Fuel efficient

Further reduction of CO_2 emissions thanks to the new aerodynamic design.

Reliable

Proven, innovative low weight concept

Flexibility

Available in different length variants, flexible door configurations, including a $3^{\rm rd}$ door

TOGETHER WE BUILD ON THE BEST ZERO EMISSION OPERATIONS

Our Citea Electric range is based on a modular concept. This means that our system makes it possible for any operator to configure their own zero emission operation. We provide systems and support that is perfectly tailored to the customer's operational needs and demands. Based on in-depth analysis, calculations and extended expertise, VDL Bus & Coach can provide an optimal solution for any operation, on any location.

VDL Bus & Coach supports you throughout the entire process and the choices involved. From choosing the battery technology to the charging system and from implementation management and connectivity to monitoring and repair and maintenance.



BATTERY

Battery technology is developing rapidly, giving rise to many different options. We are keeping a close eye on all developments and are collaborating with several battery suppliers. Aspects such as weight, price, energy density, composition and life expectancy are factors affecting the right battery choice. Another very important factor is how quickly the battery can be charged. VDL Bus & Coach mainly focuses on the operation.

In order to provide the best available battery technology, we analyse the entire operation. To realise an operation that drives over 500 km per day, fast charging batteries are used. These types of batteries are known for their flexibility and long life span, enabling charging times from 5 up to 50 minutes. The total energy level of the battery packages varies from 85 to 288 kWh.

CHARGING SYSTEM

The Citea Electric range can be charged with several charging systems based on the upcoming European standards. The charging can take place with a capacity of 30 kW to 450 kW, with a difference between slow and fast charging. All buses are equipped with a Combo2 charging plug for a charging power of 50 kW. For higher capacities, roof and infrastructure mounted pantograph options are available. With a pantograph, a capacity of up to 450 kW can be generated. The roof and infrastructure mounted pantograph can also be used for depot charging. Which system is best for an operation depends on the operation itself.











IMPLEMENTATION MANAGEMENT

During the implementation phase, VDL Bus & Coach supports you throughout the entire process. This starts with defining processes and the project scope. After that, the production of the buses and the infrastructure follows. When ready, everything will be installed and commissioned, making sure everything connects. The final step in the implementation phase is the testing and training. At every step, we work closely together to support you along the way.

CONNECTIVITY

In today's operations, buses have to be available at all times, at every moment. VDL Bus & Coach supports you with a connectivity platform, especially developed for the Citea range. By collecting and sending relevant and operational data, more control is secured and more efficiency can be realised, especially for electric operations. With several options focused on battery monitoring, route navigation and operational costs, operators now have more possibilities to optimise their entire operation.

MONITORING

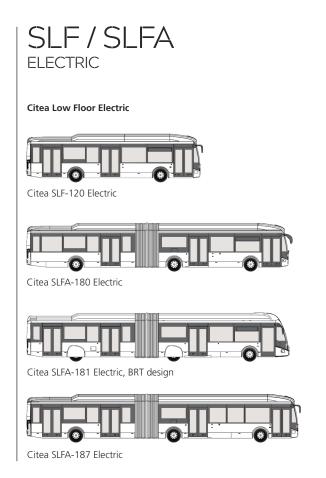
When the daily operation is live, all processes within your electrical operation are being closely monitored. The gathered data can be used to ensure maximum fleet availability and increase efficiency.

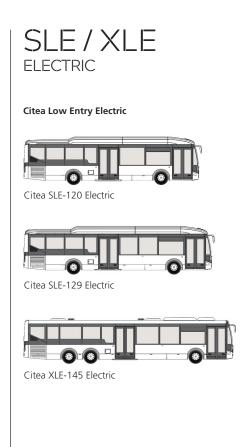
REPAIR AND MAINTENANCE

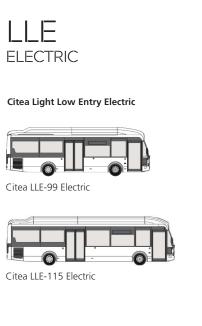
VDL Bus & Coach provides you with service that exceeds your needs, at all times. From repairs and maintenance to taking care of the infrastructure in order to maximise fleet availability, everything we do is perfectly tailored to your wishes. Training courses for your employees, rapid delivery of parts and competent service partners are all obvious to us. Because we know how important it is for you to have confidence in the reliability of your VDL buses.



TECHNICAL SPECIFICATIONS









TECHNICAL SPECIFICATIONS



Citea Electric	SLF-120 Electric	SLFA-180 Electric	SLFA-181 Electric	SLFA-187 Electric	SLE-120 Electric	SLE-129 Electric	XLE-145 Electric	LLE-99 Electric	LLE-115 Electric
Overall length	12,000 mm	18,000 mm	18,150 mm	18,750 mm	12,000 mm	12,900 mm	14,480 mm	9,950 mm	11,500 mm
Overall width	2,550 mm	2,550 mm	2,550 mm	2,550 mm	2,550 mm	2,550 mm	2,550 mm	2,500 mm	2,500 mm
Overall height*	3,290 mm	3,290 mm	3,290 mm	3,290 mm	3,490 mm	3,490 mm	3,490 mm	3,350 mm	3,350 mm
Wheelbase	5,850 mm	5,250 mm	5,250 mm	6,000 mm	6,000 mm	6,900 mm	7,275 mm	4,650 mm	6,200 mm
Wheelbase 2 nd and ^{3rd} axle		6,750 mm	6,750 mm	6,750 mm			1,500 mm		
Front overhang	2,750 mm	2,600 mm	2,750 mm	2,600 mm	2,600 mm	2,600 mm	2,600 mm	2,380 mm	2,380 mm
Rear overhang	3,400 mm	3,400 mm	3,400 mm	3,400 mm	3,400 mm	3,400 mm	3,105 mm	2,920 mm	2,920 mm
Interior saloon height (low floor)	2,416 mm	2,416 mm	2,416 mm	2,416 mm	2,554 mm	2,554 mm	2,554 mm	2,486 mm	2,486 mm
Turning circle	21,176 mm	23,370 mm	23,360 mm	24,400 mm	21,160 mm	23,550 mm	24,520 mm	16,750 mm	22,810 mm
Unladen vehicle weight**	+/- 13,250 kg	+/- 19,000 kg	+/- 19,150 kg	+/- 19,300 kg	+/- 13,500 kg	+/- 13,850 kg	+/- 16,650 kg	+/- 10,400 kg	+/- 10,900 kg
Max. total technical weight***	18,745 kg	29,000 kg	29,000 kg	29,000 kg	18,745 kg	18,745 kg	25,990 kg	14,440 kg	15,305 kg
Capacity (passengers)**	+/- 75	+/- 135	+/- 133	+/- 130	+/- 75	+/- 70	+/- 120	+/- 60	+/- 64

^{*} Including roof skirts, excluding optional pantograph.

^{**} Kerb weight and capacity depend on the selected battery pack.

^{***} According to European legislation, individual country legislation may differ.

TECHNICAL SPECIFICATIONS



Citea	LLE-99	LLE-120	LLE-127
Overall length	9,950 mm	11,980 mm	12,680 mm
Overall width	2,500 mm	2,500 mm	2,500 mm
Overall height	3,065 mm	3,065 mm	3,065 mm
Wheelbase	4,650 mm	6,200 mm	6,900 mm
Front overhang	2,380 mm	2,380 mm	2,380 mm
Rear overhang	2,920 mm	3,400 mm	3,400 mm
Interior saloon height (low floor)	2,486 mm	2,486 mm	2,486 mm
Turning circle	16,750 mm	20,630 mm	22,380 mm
Unladen vehicle weight*	+/- 8,500 kg	+/- 9,150 kg	+/- 9,500 kg
Max, total technical weight**	14,440 kg	114,870 kg	14,870 kg
Capacity (passengers)	+/- 78	+/- 80	+/- 75

^{*} Depending on execution.

^{**} According to European legislation, individual country legislation may differ.

DRIVELINES & BATTERIES



Drivelines

	Directions			
Electric motor	Siemens 1DB2016	Siemens 1DB2022		
Max power	160 kW	240 kW		
Max peak torque	2,500 Nm	3,600 Nm		
Rated power @ 1,500 rpm	116 kW	210 kW		
Rated torque @ 1,500 rpm	973 Nm	1,337 Nm		
Citea SLF-120 Electric				
Citea SLFA-180 Electric				
Citea SLFA-181 Electric				
Citea SLFA-187 Electric				
Citea SLE-120 Electric				
Citea SLE-129 Electric				
Citea XLE-145 Electric				
Citea LLE-99 Electric				
Citea LLE-115 Electric				

^{*} Siemens 1DB2022 not in combination with a 288 kWh battery system

■ Standard □ Option

Batteries

	High Capacity				High Power			
C-rate	1.5 C				4 C			
Conditioning	air-cooled, electrically heated				Silicone heat exchanger			
Energy content	180 kWh	216 kWh	288 kWh	360 kWh	85 kWh	127 kWh	169 kWh	
Charging power	270 kW	320 kW	430 kW*	430 kW*	300 kW	420 kW*	420 kW*	
Number of modules	9	9	12	15	2	3	4	
Citea SLF-120 Electric								
Citea SLFA-180 Electric								
Citea SLFA-181 Electric								
Citea SLFA-187 Electric								
Citea SLE-120 Electric								
Citea SLE-129 Electric								
Citea XLE-145 Electric								
Citea LLE-99 Electric								
Citea LLE-115 Electric								

^{*} In combination with a 800A pantograph

■ Standard □ Option

DRIVELINES



Make	Cummins ISB6.7
Power	187 kW (255 hp)
Displacement	6.7 litres
Max. torque	1,000 Nm at 1,000-1,600 rpm
Automatic gearbox	Voith DIWA.6 – ZF EcoLife
Citea LLE- 99	•
Citea LLE -120	•
Citea LLE -127	•

■ Standard















