## EBUSCO 2.2 MADE TO MOVE PEOPLE

EBILIC



STRILL

STRITTON

zero emission









# SILENT & CLEAN CITIES

Ebusco's work is all about people. It is our goal to contribute to a better living environment by enabling reliable, sustainable, emission-free and affordable public transport. We we the transition to sustainable transport!

Our electric buses ensure clean and quiet cities. This is a top priority around the world and we are pleased to make our modest contribution to it!



per bus, per kilometre

But why would you acquire an electric city or regional bus? For many people the transition from diesel to electric is by no means obvious or easy. We can imagine that you have many questions and doubts.

We'll be happy to help you with this transition. We embarked upon the electric bus adventure back in 2010, and so we already have many years of experience that we would like to share with you. Since the company's creation in 2012 we have gained extensive experience by supplying more than 150 buses to 15 European cities.

In January 2020 our buses had covered 6 million electrically powered kilometres. Our city and regional buses have normal timetables and can therefore easily cover 350 kilometres a day on a single battery charge.

The goal of Ebusco is to make clean, silent and emission-free public transport available to everyone.

### Ebusco, join our mission.

## WHY EBUSCO 2.2



**100% Electric** Fully electric buses



**Zero Emission** We love clean air



**CO<sup>2</sup> & NOx reduction** We reduce CO<sup>2</sup> and NOx







## Battery warranty

**Depot charging** 

At least 350 km on one charge

Long range

We offer 8 years battery warranty

Our buses are perfect for depot charging



CO<sub>2</sub>

NO DOUBT, ZERO EMISSION.

Zero emission is no longer a dream for the future. Fully electrically buses from Ebusco make reduced emissions a conscious choice.



The city is full of noises. Pleasant, but also annoying and dominant. Ebusco electric buses give priority to silence.



NO DOUBT, 350 KM RANGE. With a range of at least 350 kilometers, the Ebusco bus runs from early morning to late evening. There is no need for additional charging.



NO DOUBT, 90 PAX. Ebusco does not make any concessions in terms of quality and capacity. Our electric buses transport 90 people without problems.

ENTRY OF 60 BUSES IN GRONINGEN DRENTHE (NL) - 6 A

0

7312

2-

esuaço Ostre





## DRIVER & PASSENGER COMFORT

## **BUS DRIVER**

### ⊘ Comfortable workplace

- Luxurious driver's seat completely ergonomically adjustable
- Smooth ride no exhaust emissions and very little noise
- ⊘ Safe driving

a stable bus, with good day- and night-time visibility and no blind spots thanks to cameras

Your dashboard helps you with a wealth of digital, real-time information

 $\odot$  Training on the job





BUS DRIVER EXPERIENCE VIDEO

## PASSENGER

- 🛇 Comfortable and luxurious travel
- $\odot$  USB ports available throughout the bus
- 🕑 Clean air
- $\bigcirc$  Less noise
- 🔗 Airco
- 🕑 WiFi

MIRROREYE; AN INNOVATIVE CAMERA SYSTEM INSTALLED ON THE ELECTRIC EBUSCO BUS



# EUROPEAN QUALITY

To ensure the quality of our electric buses, we design, develop and assemble our buses ourselves in Deurne, the Netherlands. Practically all parts of our Ebusco 2.2 buses come from European A-grade suppliers.

Our suppliers and partners are vital to our continued success by delivering necessary products and services for our business.

**More information:** www.ebusco.com/suppliers

ALCOA	Aluminium rims	CONTINENTAL	Tires	
CONTINENTAL	Dashboard	VALEO	Heating system	
GERFLOR	Floor	STER	Passengers seats	
HELLA	Lighting	THERMOKING	Climate system	
ISRI	Drivers' seat	VENTURA	Doors	
<b>KESSELS GRANGER</b>	Bus design	VIRICITI	Monitoring system	
KIEL	Passengers seats	WABCO	Air suspension / brake support	
KNORR-BREMSE	Braking system	ZF	Front- and rear axles	
MEKRA	Mirrors	MICHELIN	Tires	

# EBUSCO 2.2

BENELUX





## Amsterdam

- 111 buses
- City and intercity
- As from December 2020



## Utrecht

- 20 buses
- Intercity
- As from june 2020



## Haarlem

- 45 buses
- Intercity
- As from December 2020



## **Groningen-Drenthe**

- 60 buses
- Intercity
- As from December 2019



## Tienen

- 10 buses
- Intercity
- As from April 2021



## Dordrecht

- 37 buses
- City
- As from April 2019

## EBUSCO 2.2

GERMANY





## Borkum

- 1 bus
- City
- As from December 2019

## **Bocholt**

- 1 bus
- Intercity
- As from December 2019

### Bonn

- 4 buses
- City
- As from 2020



## Munich

- 2 + 10 buses
- City and Intercity
- As from Oktober 2019 and June 2020





## Frankfurt

- 25 buses
- City
- As from December 2020 and November 2021

## Eisenach

- 2 buses
- City
- As from February 2020

# CHARGING SOLUTIONS

Operators would prefer to make as few changes as possible to the existing infrastructure in the transition from diesel to electric buses. We fully support this. Right from its creation in 2010 Ebusco has been a strong promoter of depot charging.

### **DEPOT CHARGING**

Our batteries are of such high quality that daytime top-up opportunity charging should not be necessary. Overnight charging in depots is sufficient, and this also places less demand on the grid in daytime. Needless to say this makes a big difference in costs and it is also better for the battery, as it extends its useful life. Furthermore there is no need to install large charging posts in cities.

### **OPTIONAL: OPPORTUNITY CHARGING**

- Inverted
- Pantograph up

EBUSCO

More information: www.ebusco.com/ batteries-and-charging/





12m LE+LF

2/3-DOOR



13.5m

2-DOOR



13m LE

2/3-DOOR



18m LF

3/4-DOOR

## **THE EBUSCO® 2.2 RANGE**

EBUSCO <sup>®</sup> 2.2	12M, 2-DOOR	12M, 2/3-DOOR	12 <sup>,9</sup> M, 2-DOOR	18M, 3/4-DOOR		
Body type	Low entry	Low floor	Low entry	Low entry		
Overall length	12,000 mm	12,000 mm	12,900 mm	18,000 mm		
Overall width	2,550 mm	2,550 mm	2,550 mm	2,550 mm		
Overall height	3,350 mm	3,350 mm	3,350 mm	3,200 mm		
Wheelbase	5,850 mm	5,850 mm	6,750 mm	5,875 mm		
Wheelbase 2 <sup>nd</sup> and 3 <sup>rd</sup> axle	-	-	-	6,025 mm		
Front overhang	2,750 mm	2,750 mm	2,750 mm	2,750 mm		
Rear overhang	3,400 mm	3,400 mm	3,400 mm	3,400 mm		
Interior height	2,400 mm	2,400 mm	2,400 mm	2,400 mm		
Unladen vehicle weight	12,850 kg	12,850 kg	13,550 kg	19,000 kg		
Max. total weight	19,000 kg	19,000 kg	19,000 kg	29,000 kg		
Capacity (passengers)	90	90	75	130		
Seat capacity (max.)	41	41	45	55		
Electric drive	Asynchronous, water-cooled. High energy recovery capacity for regenerative braking (ca. 25-40%).					
Rated voltage	AC 3 <b>φ</b> 400V	AC 3 <b>φ</b> 400V	AC 3 <b>q</b> 380V	AC 3 <b>φ</b> 400V		
Peak power	270 kW	270 kW	270 kW	250 kW		
Max. output torque	18,000 Nm	18,000 Nm	18,000 Nm	22,000 Nm		
Batteries						
Cell chemistry	LFP (inherent fireproof battery)	LFP (inherent fireproof battery)	LFP (inherent fireproof battery)	LFP (inherent fireproof battery)		
Cell capacity and voltage	105 Ah, 3.2 V	105 Ah, 3.2 V	105 Ah, 3.2 V	105 Ah, 3.2 V		
Pack nominal voltage	576 Vdc	576 Vdc	576 Vdc	576 Vdc		
Pack capacity	363 kWh / 423 kWh	363 kWh / 423 kWh	363 kWh / 423 kWh	363 kWh / 525 kWh		

\* All numbers are subject to change.





## **EBUSCO® LIVE** FULL CONTROL OF YOUR FLEET

Ebusco Live is the real-time monitoring system for all buses. It shows among other things the battery status and the average efficiency. These data are essential for bodies granting concessions and for operators in order to optimise the operation of electric buses as regards range, efficiency, emission reduction and performance. Drivers can be educated with the data gathered while driving and routes can be adjusted following detailed review of the current practical range. The insights provided into emission reduction can be valuable for both political and public perceptions of zero emission results through the use of electric buses.

Ebusco offers the Ebusco Live online monitoring system on all its buses

More info www.ebusco.com/ebusco-live



# **PROVEN TECHNOLOGY**

By choosing our buses, you opt for uncompromising electric public transport. From early morning to evening, every Ebusco bus can run full-fledged services, on every route. This offers you ultimate flexibility to use your resources and people in the best possible way.

The powerful battery also has advantages for the city. Additional charging stations are not needed and routes can be changed whenever necessary, for instance during events. The extremely low energy consumption ensures that your drivers can drive to the depot with sufficient residual charge after their service is completed, without any worries.

### **CASE STUDIES ACROSS EUROPE**

Ebusco brings the crucial energy transition a step closer to reality. It will also ensure that you can really get to grips with the EU's emission targets for public, freight and passenger transport in urban environments. We are already tackling these important challenges with the deployment of our electrically powered public transport buses. We do this together with leading cities such as Paris, Munich, Utrecht and 12 other cities. When is it your city's turn?

Stay tuned www.ebusco.com/news



## **"WE INVITE YOU TO DISCOVER OUR BUSES. LET'S CREATE VALUE FOR YOUR CITY TOGETHER."**

Peter Bijvelds, CEO Ebusco





### VERSION 01/2020

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