

# CZ LOKO

*Locomotion Excellence®*



## Company profile

# About us

The history of CZ LOKO is closely connected with the railway workshops in Česká Třebová and Jihlava, which can boast more than 170 years of tradition. Previous innovations have enabled the transformation of the original repair company of regional significance into a modern European manufacturer of rolling stock with its own know-how, development and complete service support.



## Vision

To be the first choice when choosing a partner.

To be a company that not only keeps up, but sets trends.

# Timeline CZ LOKO



STRATEGIC PARTNERSHIP  
WITH ZEPPELIN CZ, s.r.o. (CATERPILLAR)



THE FIRST MANUFACTURED  
FOUR-AXLE LOCOMOTIVE WITH  
ASYNCHRONOUS POWER TRANSFER



HYBRIDSHUNTER®  
400



THE FUTURE

2004

2008

2012

2016

2019

2022



**CZ LOKO**  
ITALIA



THE FIRST MANUFACTURED LOCOMOTIVE  
WITH ASYNCHRONOUS POWER TRANSFER



THE FIRST LOCOMOTIVE MANUFACTURED  
ACCORDING TO TSI  
CZ LOKO ITALIA FOUNDED

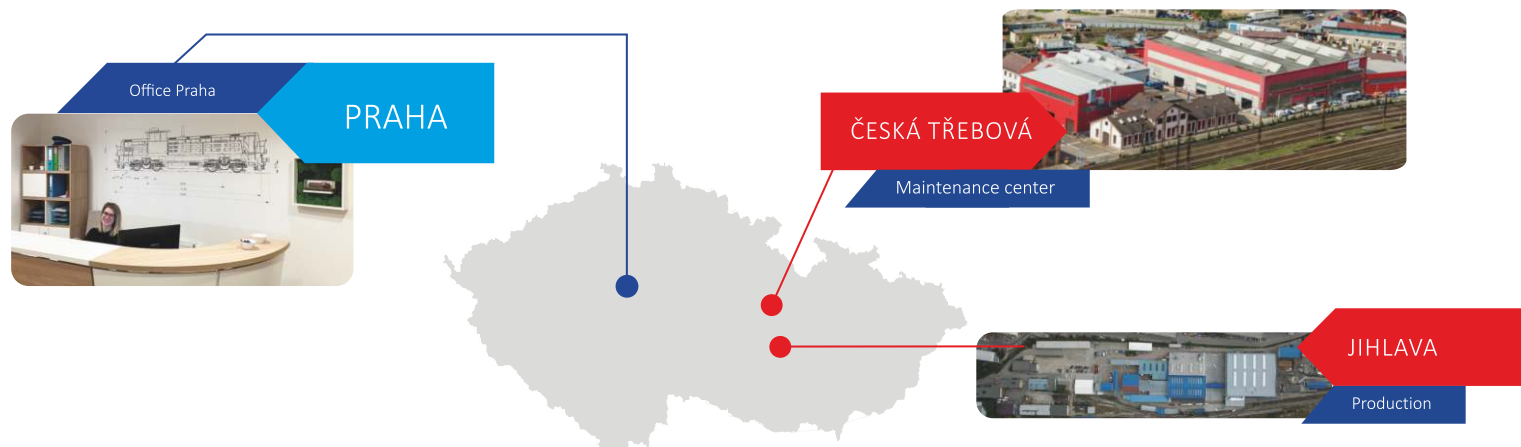


DUALSHUNTER®  
2000

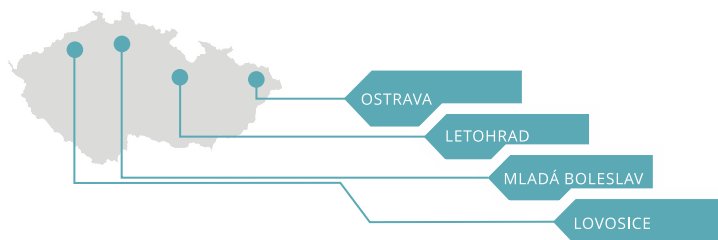


HYBRIDSHUNTER®  
1000

# Where we find us?



**CZ LOKO**  
SERVIS



Service centre providing comprehensive services right at our customers' sites.

SUBSIDIARIES

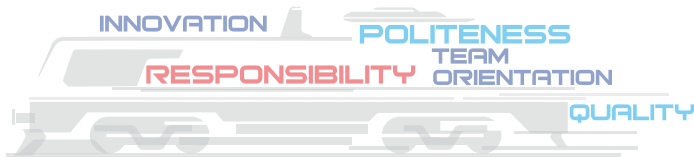
**CZ LOKO**  
ITALIA

**CZ LOKO**  
POLSKA

**CZ LOGISTICS**







# Values we stand for

These values form a binding framework of behaviour and determine the direction of our dealings with customers, business partners and, last but not least, in the context of company cooperation.



Responsibility is one of the most important characteristics that an employee can offer to CZ LOKO. On the other hand, CZ LOKO is responsible for all employees and will not leave them “hanging” in the toughest of times.



A high-quality product is not enough to stand out in the highly competitive environment. We must realize that only high quality and well done work will guarantee us a good name on the market, and we will automatically become the imaginary #1 for our customers. For CZ LOKO, the imaginary #1 is quality and job well done is adequately rewarded.



A bunch of good people and a good team – that is what makes CZ LOKO. None of us works “just for themselves”. To be able to manufacture such a complicated machine as a locomotive, we must all help and support each other.



There is no space for unfair conduct in CZ LOKO, politeness is what we value! We are all on the same boat and we each have our responsibilities. However, we cannot do it without one another. Experience sharing across positions, departments and the company is one of the ways to propel forward CZ LOKO as well as all of us individually.

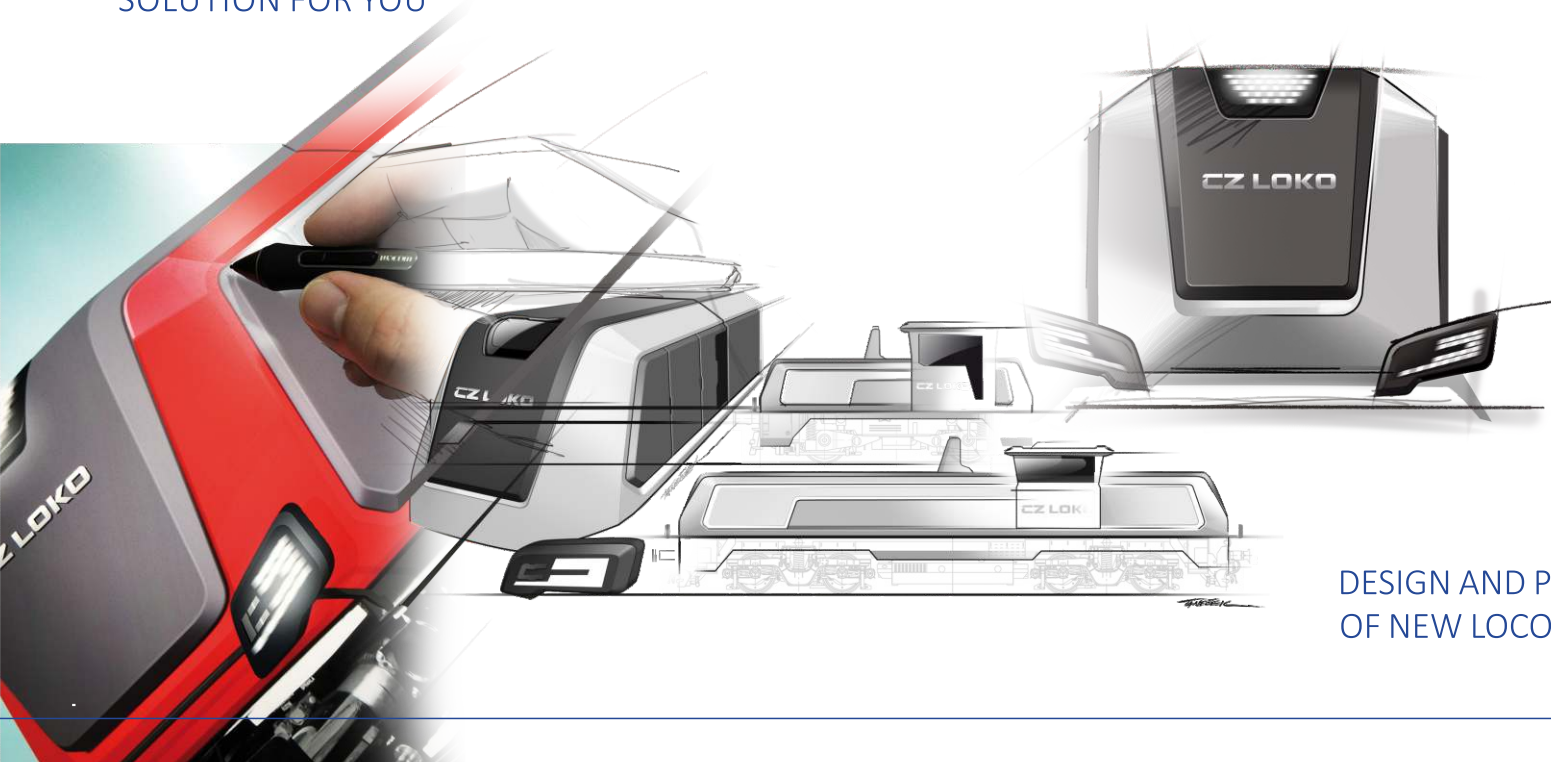


The world is evolving and so are we. What was true yesterday can be turned upside down tomorrow. Novel and original solutions can help everyone in simplifying processes, procedures and production.

# Our way

The CZ LOKO brand means our own know-how in the field of production and modernization of powered and special rolling stock, complex technical facilities, flexible approach to the needs of our business partners and efficient management of work processes.

WE WILL DESIGN A COMPREHENSIVE  
SOLUTION FOR YOU



DESIGN AND PRODUCTION  
OF NEW LOCOMOTIVES

## MODERNIZATION AND LOCALIZATION PROGRAM

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RENTAL, SERVICING, MAINTENANCE  
AND REPAIRS OF LOCOMOTIVES  
AND SPECIAL VEHICLES

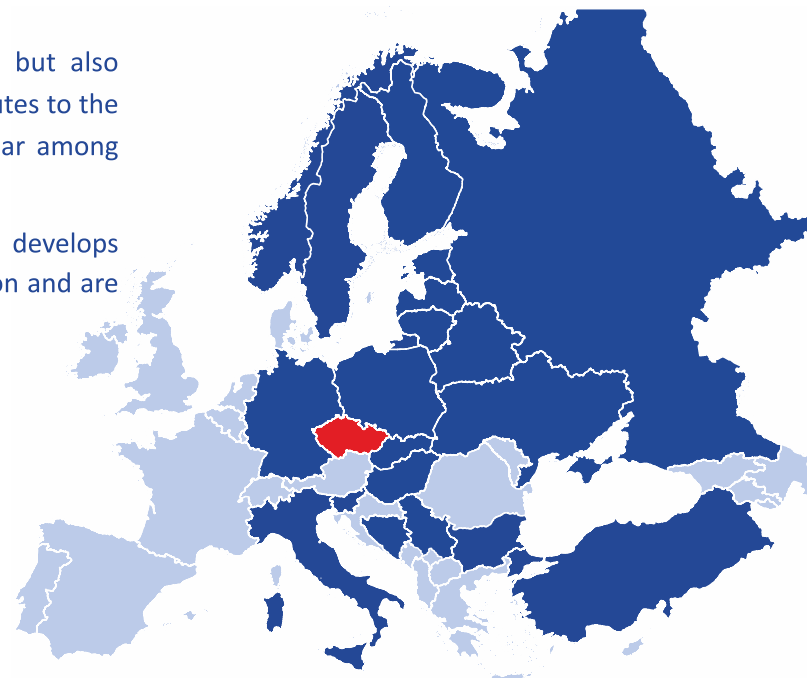
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# CZ LOKO locomotives

CZ LOKO, a.s. is a leading European manufacturer of diesel-electric locomotives with a unique offer of solutions for the development of locomotives fleets.

The modern CZ LOKO locomotives are not only environmentally friendly, but also significantly reduce the operating and maintenance costs. This greatly contributes to the overall economy of operation. For this reason, CZ LOKO products are popular among customers from all over the world.

CZ LOKO keeps up with the world's leading locomotive manufacturers and develops locomotives with alternative and hybrid drives that ensure ecological operation and are environmentally friendly.



## Advantages



Safety



Reliability



Comfort



Low operating and  
maintenance costs



Ecological operation



Unified solution

# PORTFOLIO

**EFFISHUNTER®  
300**



**CAT C13B**  
**328 kW**  
**1 435 mm**  
**AC/DC**  
**113 kN**  
**36 t**  
**Stage V**  
**EN**

**EFFISHUNTER®  
600**



**CAT C18**  
**563 kW**  
**1 435 mm**  
**AC/DC**  
**222 kN**  
**72 t**  
**Stage V**  
**EN**

**EFFISHUNTER®  
1000M**



**CAT 3508C**  
**1 000 kW**  
**1 435 mm**  
**AC/DC**  
**204 kN**  
**70 t**  
**Stage IIIA**  
**EN**

**EFFISHUNTER®  
1000**



**CAT C32**  
**895 kW**  
**1 435 mm**  
**AC/AC**  
**262 kN**  
**80 t**  
**Stage V**  
**TSI**

**DUALSHUNTER®  
2000**



**CAT C32**  
**895 kW**  
**2 200 kW**  
**3 kV DC/25 kV, 50 Hz AC**  
**1 435 mm**  
**AC/AC**  
**262 kN**  
**80 t**  
**Stage V**  
**TSI**



# EFFISHUNTER® 300



**EffiShunter 300** is a modern two-axle locomotive suitable for light shunting in depots, on sidings and at stations. Meeting the gauge for special tracks also allows it to be operated in metro tunnels. The simple design of the vehicle was chosen with regard to the lowest possible purchase price and subsequent operating costs.

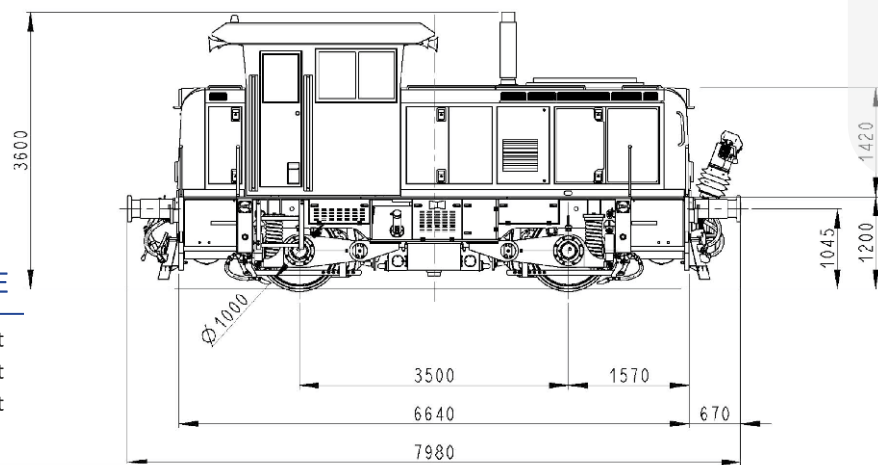
## Locomotive parameters

Track gauge	1,435 mm/1,520 mm
Meets the standards	EN
Undercarriage arrangement	B <sub>0</sub>
Maximum operating speed	60 km/h
Minimum curve radius	60 m
Line class	A
Transverse passage	2
Power transfer	electric AC/DC
Diesel engine	CAT C13B
EU Stage	V
Rated output	328 kW
Maximum tractive effort	113 kN
Nominal weight	36 t
Compressor output	108 m³/h
Fuel tank volume	700 l
Climate class	-40 – +40°C
Vehicle outline	G1

## TRANSPORT AT A CONSTANT SPEED UP TO A 4% GRADE



9 km/h,	1,500 t
14.7 km/h,	1,000 t
23.7 km/h,	600 t



**EFFISHUNTER®**  
**300**



EFFISHUNTER®  
6000



**EffiShunter 600** is design for medium-heavy shunting, especially on sidings. The design makes it suitable even for demanding conditions with increased ambient temperature and dust, which are typical for metallurgical operations. With an adjusted undercarriage fit, the locomotive can pass through curves with a minimum radius of up to 60 m.

## Locomotive parameters

Track gauge	1,435 mm
Meets the standards	EN
Undercarriage arrangement	B <sub>0</sub> ' B <sub>0</sub> '
Maximum operating speed	80 km/h
Minimum curve radius	80 (60) m
Line class	B1
Transverse passage	1
Power transfer	electric AC/DC
Diesel engine	CAT C18
EU Stage	V
Jmenovitý výkon	563 kW
Maximum tractive effort	222 kN
Nominal weight	72-78 t
Compressor output	140-175 m <sup>3</sup> /h
Fuel tank volume	4,000 l
Climate class	-25 – +40°C

## TRANSPORT AT A CONSTANT SPEED UP TO A 4% GRADE

7.4 km/h,	2,700 t
11 km/h,	2,000 t
22.6 km/h,	1,000 t



**EFFISHUNTER®**  
**600**





EFFISHUNTER<sup>®</sup>  
10000



The **EffiShunter 1000M** diesel locomotive is designed for medium-duty shunting and line service on sidings and lines. It is designed as a hood unit type with a turret driver's cab. The drive unit is a Caterpillar CAT 3508C diesel engine.

## Locomotive parameters

Track gauge	1,435 mm
Complies with	EN standards
Wheelset arrangement	B <sub>0</sub> ' B <sub>0</sub> '
Maximum operating speed	100 km/h
Minimum curve radius	80 m
Line class	B1
Transverse passage	1
Power transfer	electric AC/DC
Combustion engine	CAT 3508C
EU Stage	IIIA
Nominal output	1000 kW
Maximum tractive effort	204 kN
Nominal weight	70 t
Compressor output	153 m <sup>3</sup> /h
Fuel tank volume	3,750 l
Climate class	-25 – +40 °C
Vehicle gauge	G1
ETCS	YES

## TRANSPORT AT A CONSTANT SPEED UP TO A 4% GRADE

15.7 km/h,	2,800 t
21.1 km/h,	2,100 t
34.6 km/h,	1,200 t



**EFFISHUNTER**  
**1000M**





EFFISHUNTER®  
1000



**EffiShunter 1000**, the flagship product of CZ LOKO, is designed both for operation on industrial sidings in the most demanding conditions and for line service. For these purposes, it may be equipped with ETCS. Approval according to the internationally recognized TSI certificate guarantees the maximum possible interoperability in the countries of the European Union.

Locomotive parameters

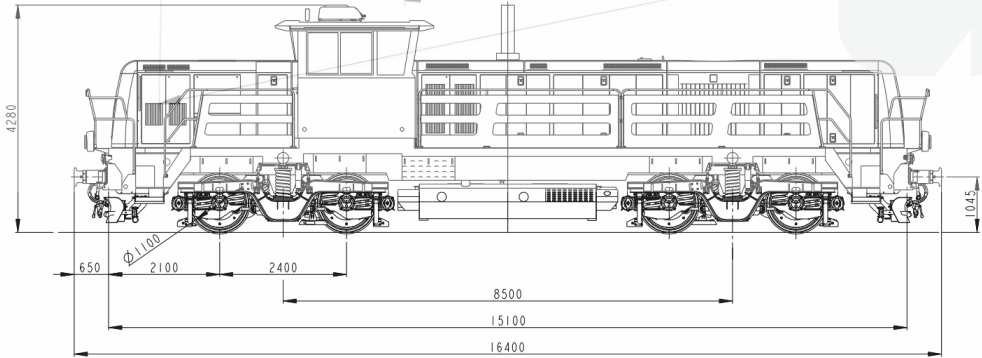
Track gauge	1,435 mm/1,520 mm
Complies with	TSI
Wheelset arrangement	B <sub>0</sub> ' B <sub>0</sub> '
Maximum operating speed	100 km/h
Minimum curve radius	80 m
Line class	C2
Transverse passage	1
Power transfer	electric AC/AC
Combustion engine	CAT C32
EU Stage	V
Nominal output	895 kW
Maximum tractive effort	262 kN
Nominal weight	80 t
Compressor output	140-252 m³/h
Fuel tank volume	4,200 l
Climate class	-40 – +40°C
Vehicle gauge	G1
ETCS	YES

TRANSPORT AT A CONSTANT SPEED UP TO A 4% GRADE

15.1 km/h,	2,850 t
20.4 km/h,	2,100 t
32.5 km/h,	1,200 t



EFFISHUNTER®  
1000



# DUALSHUNTER® 2000





**DualShunter 2000** is a locomotive designed for medium-duty shunting and line service on 3 kV DC or 25 kV, 50 Hz AC electrified lines and is equipped with a Caterpillar C32 diesel engine for independent traction operation. As a result, it is possible to take advantage of dependent traction when hauling freight trains on electrified lines and at the same time, its sufficiently powerful diesel engine enables trouble-free operation on sidings and lines that are not electrified.

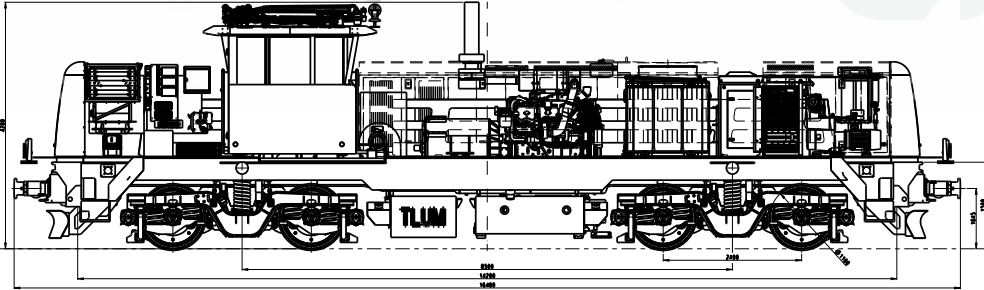
### Locomotive parameters

Track gauge	1,435 mm
Complies with	TSI standards
Wheelset arrangement	B <sub>0</sub> ' B <sub>0</sub> '
Maximum operating speed	120 km/h
Minimum curve radius	80 m
Line class	C2
AC traction system	25 kV 50 Hz/15 kV 16.7 Hz
DC traction system	3 kV DC
Power transfer	AC/AC
Diesel engine	CAT C32
EU Stage	V
Diesel output	895 kW
Maximum tractive effort	262 kN
Nominal weight	80 t
Compressor output	140–252 m <sup>3</sup> /h
Fuel tank volume	approx. 1,000 l
Climate class	-40 – +40 °C
Vehicle gauge	G1
ETCS	YES

### TRANSPORT AT A CONSTANT SPEED UP TO A 4% GRADE

#### DIESEL / OVERHEAD LINE

15.1 km/h / 39.9 km/h, 2,600 t  
21.2 km/h / 52.7 km/h, 1,800 t  
29.9 km/h / 69.4 km/h, 1,200 t



**DUALSHUNTER<sup>®</sup>**  
**2000**



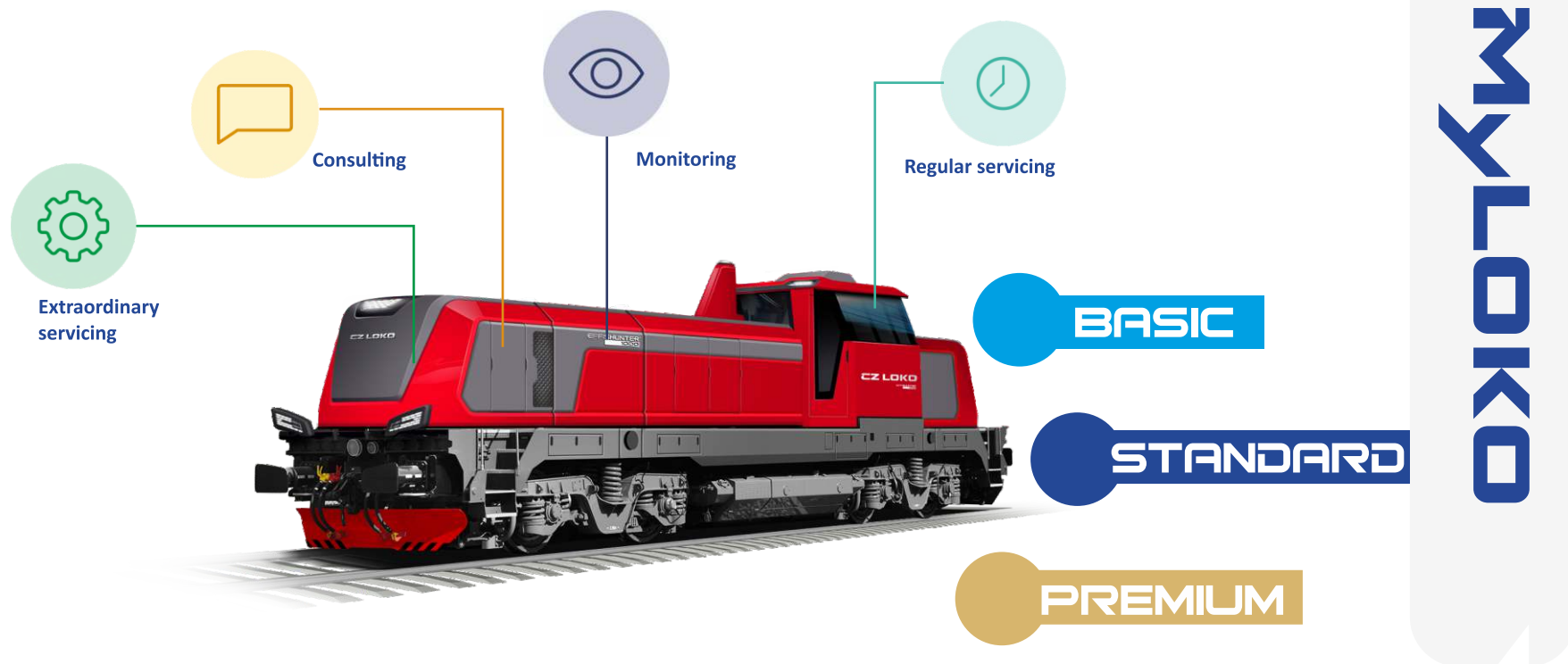
Our options are unlimited. We can satisfy your needs in the field of vehicles designed for the construction, repair or reconstruction of railway infrastructure. An example is the universal motor truck used for railway infrastructure maintenance. We can supply components such as a snow blower or lawn mower. We can design a measuring car for diagnosing geometric parameters of tracks and rail defects.



MUV 75 Správa železnic.



MUV 74 M-S Metro Sofia.



Let us take control of your machine with our intelligent desktop application **MyLOKO** which you can also have in your pocket. The application will monitor the proper performance of regular maintenance for you and at the same time it will clearly show how your locomotives are used.

CZ LOKO is a proud holder of the **ECM** (Entity in Charge of Maintenance) certificate, thus becoming „an entity responsible for the maintenance of rolling stock” and for the proper and timely maintenance of individual vehicles in their sphere of competence.

**EasyRENT** can help you increase the transport capacity of your rolling stock with short and long-term locomotive rental or can quickly provide a replacement in the event of a failure of one of your locomotives.

At the end of the rental period, you can opt to extend the contract, purchase the vehicle or terminate the contract with no obligation to buy the vehicle.

## Take advantage of the medium or long-term rental of the EffiLiner 3000 electric locomotive

The EffiLiner 3000 electric locomotive is primarily intended for line service on national as well as regional lines. The parameters of the modernised two-system locomotive with the original designation CLASS 12 are optimised for freight trains.

### Locomotives

We offer short and long term rental of both diesel and electric locomotives.

If needed, we can also provide you with a driver or regular maintenance of the rented locomotive.



### Benefits

- No long-term commitments.
- Improves financial ratios.
- Enable off-balance sheet financing.
- Stabilises cash flow.
- Addresses specific customer needs.
- Can be arranged as „full” service.
- Option to rent with a driver.

[pool@czloko.cz](mailto:pool@czloko.cz)

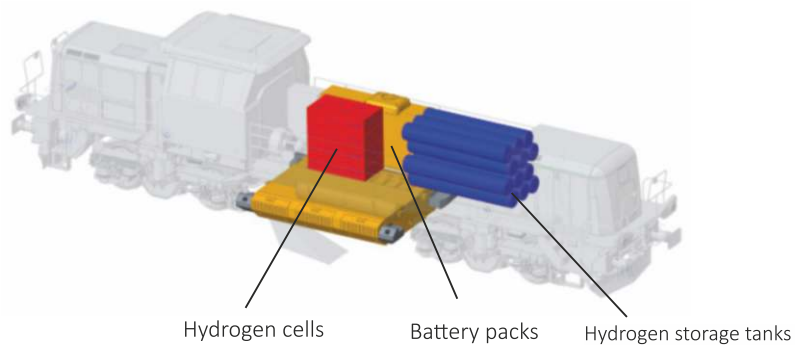




**HydrogenShunter 1000** is another modification of EffiShunter 1000. Its primary source of energy is a set of four fuel cells, supplemented by batteries. The fuel cells are also used to recharge the batteries. The advantage of this model is minimal noise and zero emissions at its place of operation. This will be appreciated by operators especially in urban agglomerations and closed halls.

## Locomotive parameters

Track gauge	1,435 mm
Complies with	TSI standards
Wheelset arrangement	B <sub>0</sub> ' B <sub>0</sub> '
Maximum operating speed	100 km/h
Minimum curve radius	80 m
Maximum tractive effort	270 kN
Nominal weight	80 t
Climate class	-40 – +40 °C
Length over buffers	16,400 mm
Height	4,280 mm
Width	3,060 mm
Vehicle gauge	G1



# Current projects

Mass production of EffShunter 1000 locomotives is currently underway at the Jihlava plant. These locomotives are intended for operation in the Czech Republic, Italy, Hungary, Romania, Sweden, Norway and Slovakia. The 744.1 series locomotive is becoming increasingly popular with operators. It meets the strict TSI standards and is equipped with the European Train Control System (ETCS) on request.



The brand new dual locomotive, which is manufactured in Jihlava, is intended for an Italian customer who operates other series of locomotives produced by CZ LOKO, the flagship EffiShunter 1000 and the modernized locomotives 741.7.



# Current projects

Modernization of locomotives is also popular, when only the frame and bogies are left from the original locomotive, but they are modified according to the current legislation. CZ LOKO provides modernization of the 742, 723 and 741 series.



From 1 January 2025, all locomotives and special vehicles entering main lines will have to be equipped with the European Train Control System (ETCS). At present, special vehicles MUV 75, 750/753 series locomotives and locomotives from CZ LOKO production are being fitted. The pictures show a view of the control console when running with ETCS switched on and the "twin" 742.71, which was running on ETCS at that time.





# Work with a future

We are a strong and stable employer. We build long-term cooperation with our employees and therefore expend considerable effort and financial resources to ensure a high-quality working environment and attractive conditions.



## Attractive environment

We invest in the construction of new plants and the modernisation of existing plants. An assembly hall with a production area of 2,500 sqm was built in Jihlava. In Česká Třebová a hall for the repair of wheelsets was modernised and houses modern machines.



# We support Czech education

We have been cooperating with schools in the regions for a long time, because we are aware that we can only become a leader in the field and further develop our technological and production know-how with the help of educated experts.



Univerzita  
Pardubice  
Dopravní fakulta  
Jana Pernera

Together with the Jan Perner Transport Faculty of the University of Pardubice, we work on many research projects.



STŘEDNÍ ŠKOLA  
**TECHNICKÁ A DOPRAVNÍ**  
GUSTAVA HABRMANA ČESKÁ TŘEBOVÁ

We helped the Higher Vocational School and Technical High School in Česká Třebová with the reconstruction of a locksmith workshop. One of the main goals was to help the school attract more students to the technical fields of locksmith, electrical mechanic and electrician, which are important for us. Cooperation with the school continues also in other areas of teaching and practice.



In the CZ Trinee programme, we offer students of the last years of high schools and universities the opportunity to get to know CZ LOKO. We trust young people, we develop their skills and potential in order for them to find what they are good at and what they will enjoy.



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2023