



QUANTRON

Quantron Cizaris

CIZARIS 12 EV

BEV

The full-electric solution for inner-city transit

QUANTRON

CIZARIS

Empower the Future



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Dear customers,

Quantron AG offers you innovative and practical e-mobility solutions and thus makes a sustainable contribution to the decarbonization of road transport. In the Q-Mobility business unit, we supply our own buses, vans and trucks of the QUANTRON brand based on our highly innovative QUANTRON inside technology. Like all our vehicles, the all-electric QUANTRON CIZARIS embodies our core values Reliable, Energetic and Brave. It stands for emission-free and clean mobility, safety, and maximum comfort for passengers. With our Q-Ecosystem, we also offer you an all-round service package - from consulting on a vehicle tailored to your personal needs to the installation of the appropriate charging infrastructure. Contact us, we will accompany you on your way to e-mobility.

Best regards

Yours, Andreas Haller
Founder and Chairman of the Board of Quantron AG



Have you heard
about the new
normal?

Zero Emission. Full Power. Better Future.





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QUANTRON CIZARIS 12 EV

QUANTRON's vision is a greener world. With zero-emission commercial vehicles, we are making our contribution to reducing CO2 emissions and thus to achieving global climate targets. We want to change the future in a sustainable way. The QUANTRON CIZARIS offers a reliable and environmentally friendly solution for inner-city passenger transport. At QUANTRON, the decision for an electric bus is no longer a question of price, but primarily a decision for a sustainable and low-noise alternative.

As a high-tech spinoff of the family-owned company Haller GmbH & Co. KG, builds on over 140 years of commercial vehicle experience. The name "CIZARIS", a reference to the city goddess Ciza, shows the connection to the hometown of Augsburg, where it all began in 1882 with a horse-drawn carriage business. But "CIZARIS" also stands for the core values of the bus: the basic "CI" for the application area "City", the central "Z" for "Zero (emissions)" and the suffix "ARIS" derived from the Greek for "the noblest/the best".



That's why QUANTRON CIZARIS:

- No CO2 emissions
- Pleasantly quiet
- Balanced price-performance Ratio
- Top range: 370 km (according to E-SORT 2)
- High safety (through MirrorEye-System)
- Proven and reliable Technology
- Available in both right and left-hand drive versions available
- 8-year battery warranty*
- More than a bus: all-round support through the QUANTRON Ecosystem



Driving safety

Safety and reliability have top priority at QUANTRON. The CIZARIS therefore relies on vehicle technology that has already been proven thousands of times in continuous operation and on a high-quality standard for all installed elements. In combination with the robustly constructed chassis, the CIZARIS offers comprehensive protection for drivers and guests.

The integrated MirrorEye Camera Monitor System (CMS) provides an additional measure of safety for the vehicle occupants, but also for all other road users, in particular cyclists and pedestrians. This mirror replacement system uses external digital cameras and digital monitors in the driver's cab to provide an enlarged field of vision and eliminate blind spots. As a result, even at night and in poor weather conditions, the driver retains an overview of his surroundings and the vehicle interior.

Modern security systems for comprehensive protection:

- Proven technology of the drive and battery system
- MirrorEye Camera Monitor System (CMS)
- Latest electronic safety systems such as ABS/ASR, EBS 5.0,
- ECAS from European production
- Can be equipped with turn assist on request
- Fire detectors (temperature/gas sensors) and separate powder
- Powder extinguishing cartridges in the rear compartment, in the battery modules and other high-voltage components





Comfort guarantee for drivers and guests

Best European quality

The QUANTRON CIZARIS not only impresses with its appealing design, but also offers maximum comfort for the driver and passengers. The high-quality standard equipment in the driver's compartment, including an ergonomic air-suspended seat with heating and cooling as well as an adjustable steering column, ensures optimal well-being in the workplace. At the same time, the technical equipment with rear-view camera and the mirror replacement system (CMS) provides an all-round view of the interior and surroundings of the bus for safe driving by day and night.

Our advantages in the driver's compartment and guests

- Isri driver's seat 6860/875 NTS 2
- Air-suspended, versatile adjustable seat with heating and cooling
- Clear overview of all relevant information via a large, high-resolution display in the dashboard
- Fully digital instrument cluster
- Adjustable steering column
- Low noise power steering pump in rear
- Rear view camera in color display
- Passenger compartment and surroundings optimally in view via CMS
- DTCCO 4.0 Intelligent tachograph (VDO)
- Data recording (optional)





Interior design

With its friendly and bright design, the passenger compartment provides a great sense of space. Indirect side lighting and additional transversely mounted LED lights with changeable colors create a pleasant atmosphere that can be adapted to day and night travel. A special design feature is the elaborately perforated aluminum ceiling. On request, the equipment can be additionally individualized with flexibly positionable stop request buttons and seat cover that can be variably designed with digital textile printing. Wide aisles allow free access to all seats with plenty of legroom. The CIZARIS thus offers a comfortable ride, especially for people with limited mobility. Particularly practical are the hop-on/hop-off seats in the rear of the vehicle, which offer short-haul drivers quick and easy access to seats.

Modernity also comes into play when it comes to USB chargers: Available are sidewall-mounted USB-A plugs and USB-C plugs (optional) under the comfortable seats.



Our advantages in the passenger compartment:

- Quiet and clean ride thanks to 100 % electric drive
- Appealing interior design thanks to friendly and bright colors
- Color accents for easy orientation
- Individually printable fabric design of the seats (produced for the first time in this segment using textile digital printing)
- Plenty of legroom and space for luggage and optional installation of a luggage rack, for example for use at airports
- Depending on the battery package, space for up to 95 passengers
- Aluminum insulated floor with anti-slip coating
- Stainless steel grab rail system
- Aluminum/plastic roof and wide side paneling
- Flexibly positionable stop request buttons with acoustic and visual feedback
- USB ports for passengers on and under seats (USB-A and/or USB-C)
- Hop-on/hop-off seating in the rear area
- Efficient air conditioning and heating
- LED interior lighting for day and night







Accessibility

The QUANTRON CIZARIS enables sustainable mobility in the city - for everyone. That's why uncomplicated barrier-free entry and exit is part of the vehicle's basic equipment. The front area of the vehicle and the aisle are easily accessible, even with walking aids such as rollators, thanks to their comfortable width. The rear area can be accessed barrier-free by wheelchair users or people with strollers with the aid of a ramp. For easy orientation, reference points are highlighted in color in the interior, and there are also haptic aids such as Braille on the stop request buttons.

- Convenient access for passengers with restricted mobility (up to three doors, each 1,200 mm wide)
- Wide passages between the axles or to the optional third door at the rear
- Ramp in the rear with 350 kg load capacity
- Can be optionally equipped with electric ramp
- Large and clearly laid out low-floor area, including large wheelchair space
- Customizable color accents for easy orientation
- Stop request buttons with Braille



Climate system:

The right climate on board is provided by a highly efficient heat pump/air conditioning unit with a cooling capacity of 33 kW, and the driver also has a front box. Through the advanced principle of “Positive Temperature Coefficient Heating (PTC)”, the total heating capacity can be increased to a total of 50 kW.

Roof mounted HVAC unit
(Heating, Ventilation and Airconditioning)

Passenger area:

Including heat pump functionality

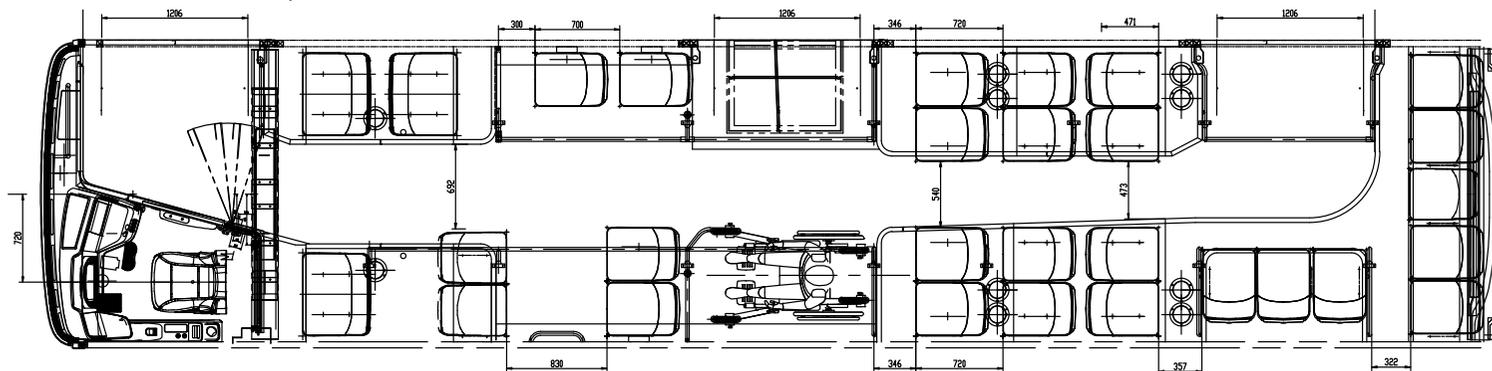
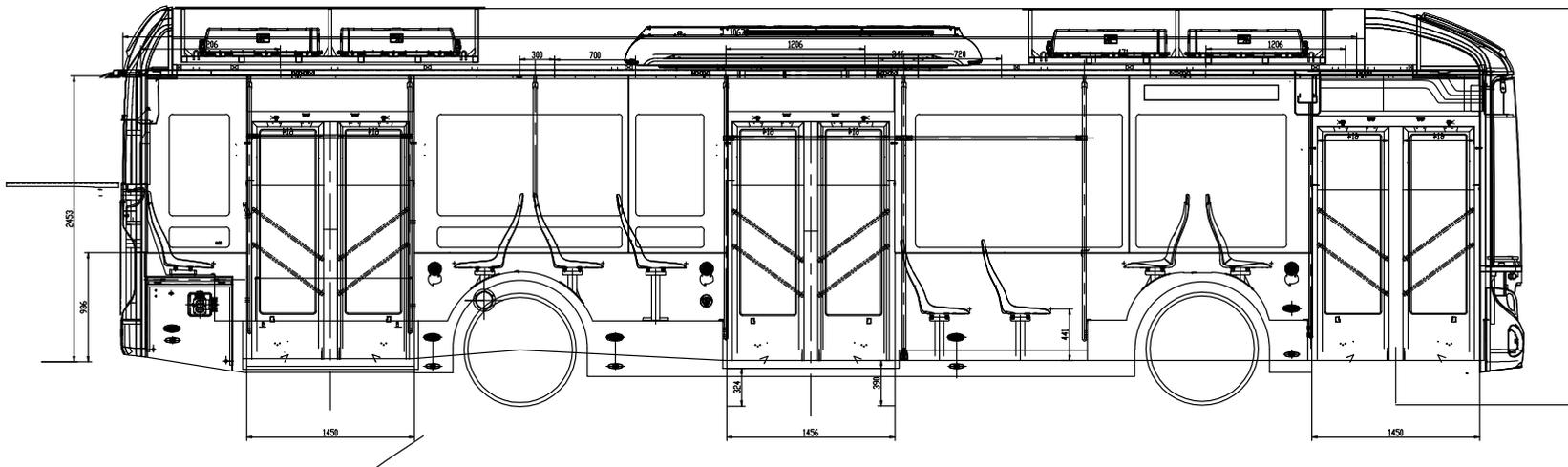
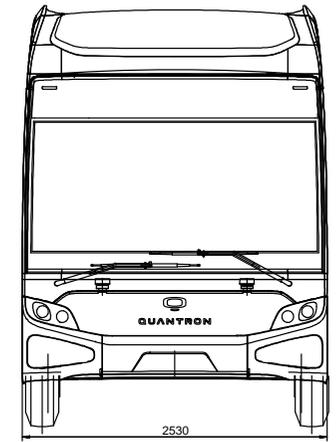
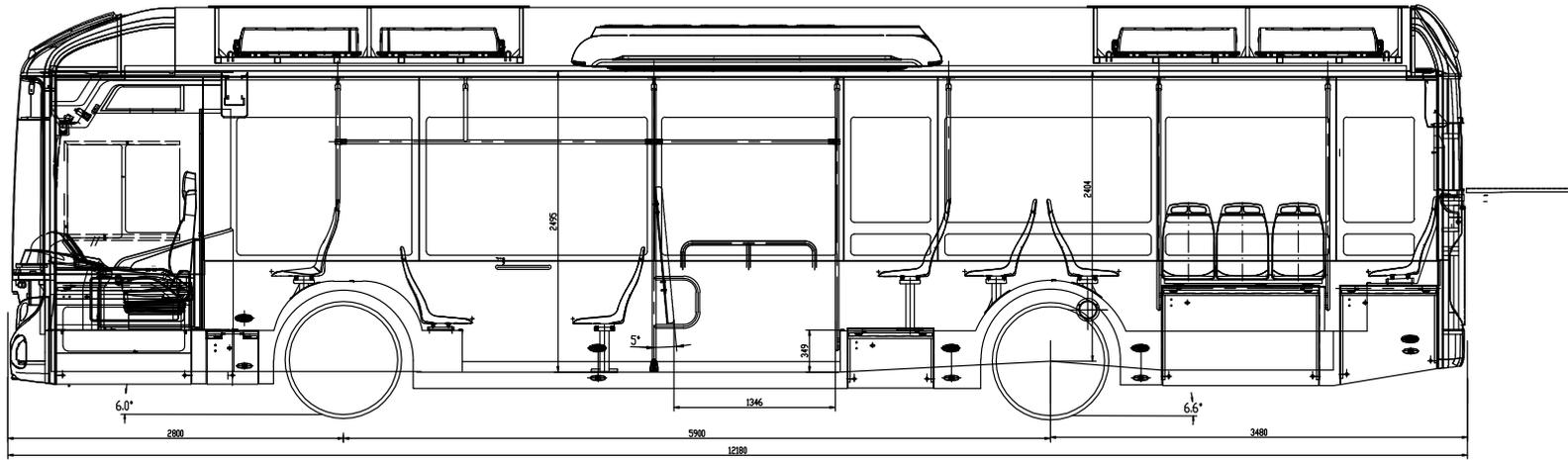
- Capacity cooling 33 kW
- Capacity heatpump 20 kW
- Capacity PTC heating 50 kW (additional heating)

Driver's area:

Defroster with airconditioning and electric heating function

- Capacity cooling 4 kW
- Capacity heating 6 kW





Dimensions

Overall Length	12180
Overall width	2550 mm
Overall height	3450 mm
Wheel base	5900 mm
F/R overhang	2800/3450 mm
Turning radius (outer front corner)	11,461 mm
Turning radius (outer front wheel)	9,429 mm
Angle of Approach & Departure	7°
Permissible total weight	19500 kg
Passenger seat capacity	25-36
Passenger capacity	81- 95





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Options

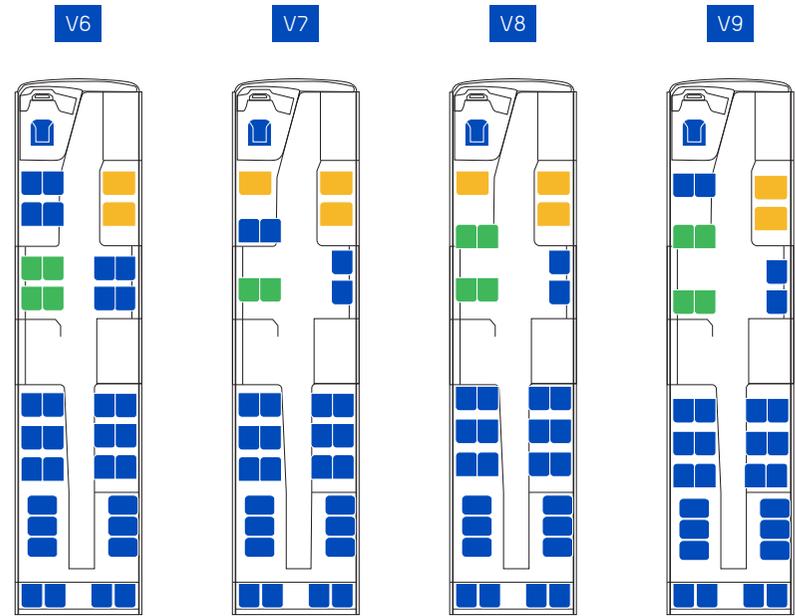
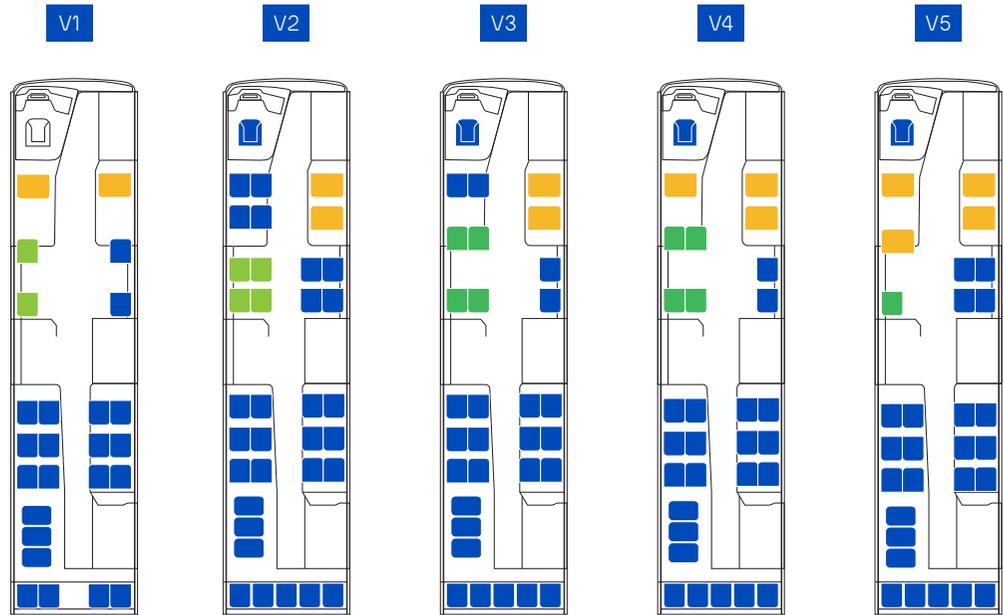
The all-electric low-floor city bus is currently available with BEV (battery-electric) drive as a 2 or 3-door model and as a right- or left-hand drive.

9 Passenger seats configurations:

- 5 configurations for the 3 doors version
- 4 configurations for the 2 doors version

Amount of capacity of total passengers depends on:

- Configurations of the seat plan.
- Size of the battery. (weight)
- Single glass or double glazed windows.
- 2 or 3 doors version.
- Further options



■ Seats for passengers with disabilities

■ Mother/Child seats

3 Doors	Seats	Standee's + wheel chair	Standee's no wheel chair	Total passengers	Standing surface
V1	25	60	70	95	8.8862 m ²
V2	34	47	57	91	7.1411 m ²
V3	30	53	63	93	7.9534 m ²
V4	29	56	66	95	8.0732 m ²

2 Doors	Seats	Standee's + wheel chair	Standee's no wheel chair	Total passengers	Standing surface
V6	36	44	53	89	6.777 m ²
V7	32	50	60	92	7.5893 m ²
V8	31	52	62	93	7.7294 m ²
V9	31	52	62	93	7.7091 m ²



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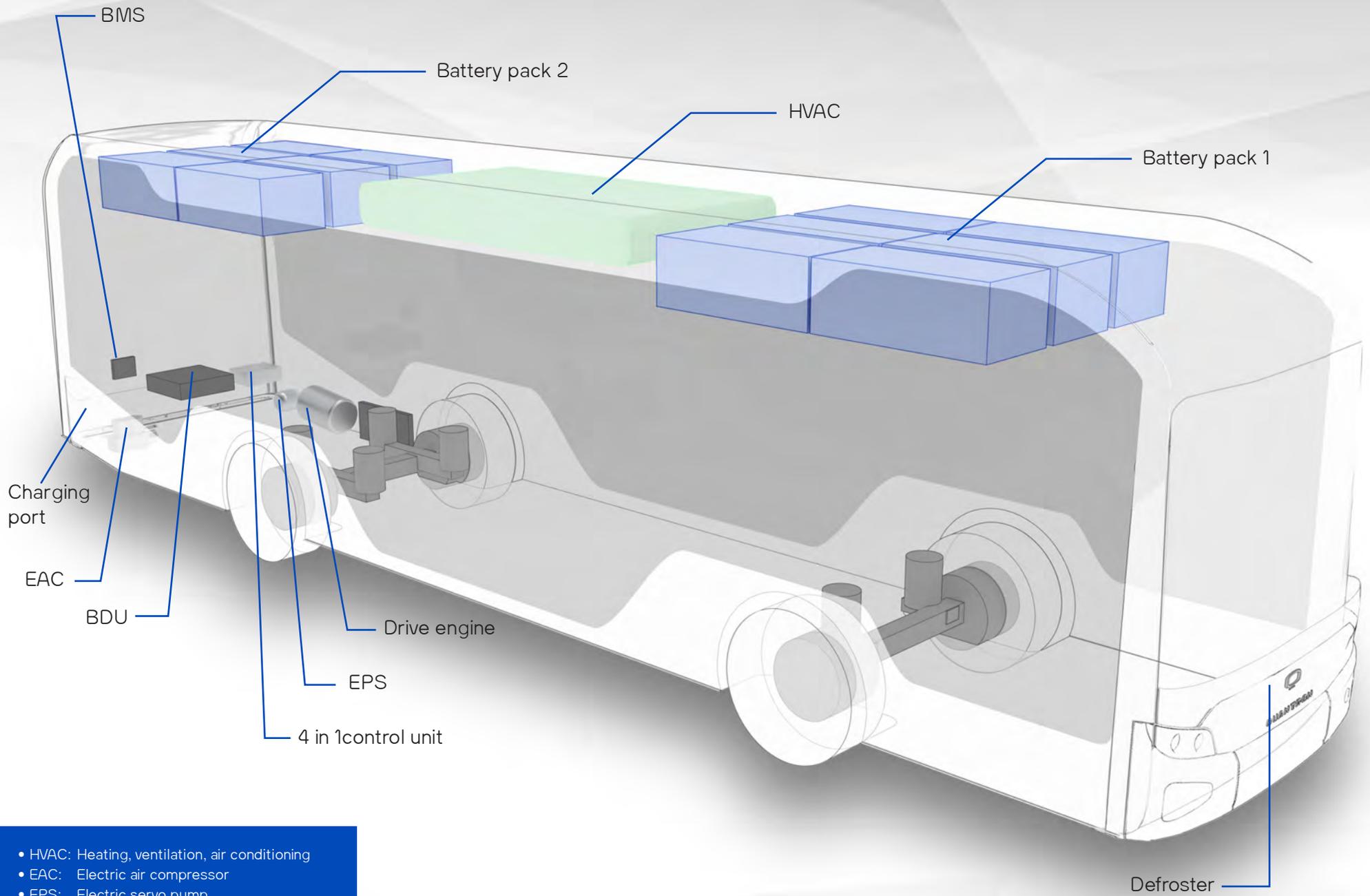
Electric drive line specifications

Battery-electric version (BEV)

Max Motor power	245 kW
Max Motor torque	3329 Nm
Range	220-370 km *
Battery capacity	242/281/363/422 kWh
Charging time	2-5 Hours
Maximum charging power	150 kW
Max speed	80 km/h
Gradeability	20 %

* E-SORT 2





- HVAC: Heating, ventilation, air conditioning
- EAC: Electric air compressor
- EPS: Electric servo pump
- BDU: Battery Distributor

Information on high-voltage technology

Battery-electric version (BEV)

Traction Motor & controller	Dana TM 4	Liquid cooled, permanent magnetic 6 phase motor
Battery pack & BMS	CATL	LiFePO4 Lithium Iron Phosphate battery with water cooling and PTC heating
Air compressor	SORL	Electric driven piston air compressor 5 kW
Power steering	Bosch/ZF	Electric-Hydraulic pump 3 kW
Transmission	None	Direct drive
High control system	HCH	4 in one intelligent control system.
Charging port	CCS TYPE II (DC Charging)	

The undoubtedly most important technology component of an electric bus is the battery and drive technology. Here, QUANTRON relies on the combination of robust and reliable lithium-iron phosphate batteries and the highly efficient synchronous central motor from Dana/TM4. This combination is the optimal duo to convert on-board energy into propulsion as safely and efficient as possible. The battery capacity can be chosen from 242 kWh to 424 kWh. The roof-mounted battery packs (maximum six at the front and six at the rear, depending on customer requirements) from CATL with a maximum of 150 kW direct current (DC) allow fast-charging in two to five hours. The matching CCS combo plug is installed on the right or left in the rear according to the customer's wishes.





Chassis

Front axle	DANA GK	Load capacity 7500 (8000) kg
Rear Axle	DANA GK	Load capacity 13000 kg
Brake system	WABCO ABS/EBS	Hill Aid/Doorbrake function
Retarder	Dana TM 4	Regenerative braking
Air suspension	Wabco ECAS	With kneeling function
Wheels & Rims	Michelin	Tire size 275/70 R22.5 with Aluminium Rims

Top quality from leading suppliers

All information is based on the current status as of February 2022. QUANTRON reserves the right to change the technical characteristics and specifications of its products without prior notice.

Quantron cooperates with renowned international partners in order to ensure high quality equipment and safe technology in all its vehicles. The brand-typical design features as well as the customer-specific adaptations for the highly regulated municipal traffic are carried out in first-class european workshops such as the QUANTRON plant in Augsburg. This ensures European quality standard down to the smallest detail.

- Ballard Power Systems Inc.
- Dana Incorporated
- Michelin
- Grammer AG
- CATL
- Knorr Bremse
- Franz Kiel GmbH
- Isringhausen GmbH & Co. KG
- Wabco
- Valeo



IRON

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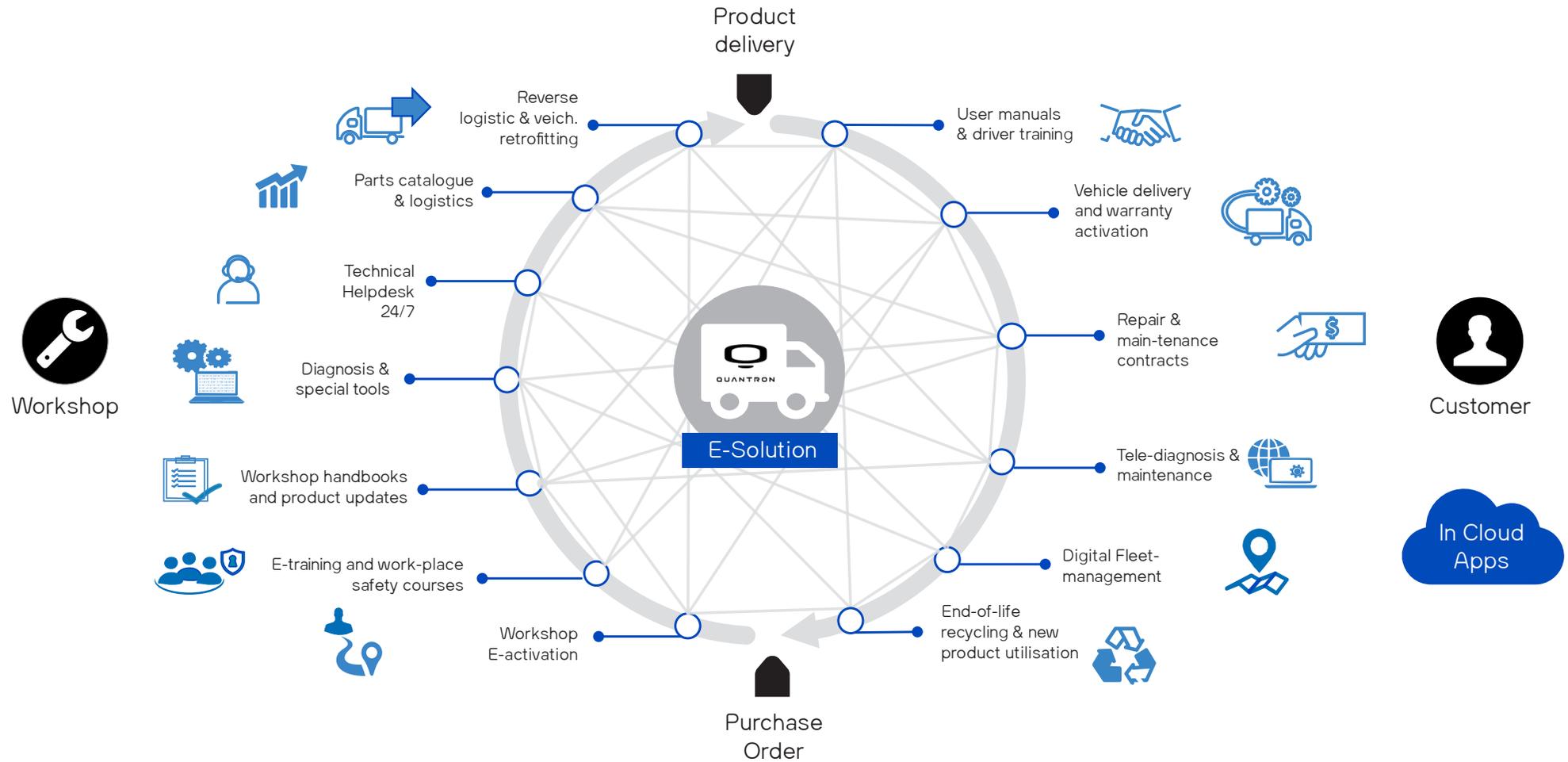
The QUANTRON Design - Interior & Exterior

The CIZARIS features a modern vehicle design with an appealing welcome character. The eye-catching features are the deliberately placed color components in “Absolute Zero Blue”. The front of the vehicle with its windshield pulled far down and the clearly rounded roof edges take away the vehicle’s bulkiness and, in conjunction with the refined side graphics, convey a distinctly three-dimensional impression. The low-floor character of the bus is highlighted by the black contrasting center section, while the roof edge trim at the front and rear puts the emphasis on the battery technology, which is hidden there on the roof outside any crash zones. The rear also has a visually striking effect with its large taillights, some of which are made of frosted glass or have a light-barrel design.

The QUANTRON logo can be found in many details of the vehicle - a symbol for the three brand values “Reliable, Energetic, Brave”. The values are also embodied in the striking three-part intermittent “running light indicators” in the front, which are similarly installed in other QUANTRON models.



The QUANTRON Service Circle



Combining product, organizational, digital and commercial know-how, QUANTRON-Aftersales offers a full package of e-mobility services to both, workshops and customers.



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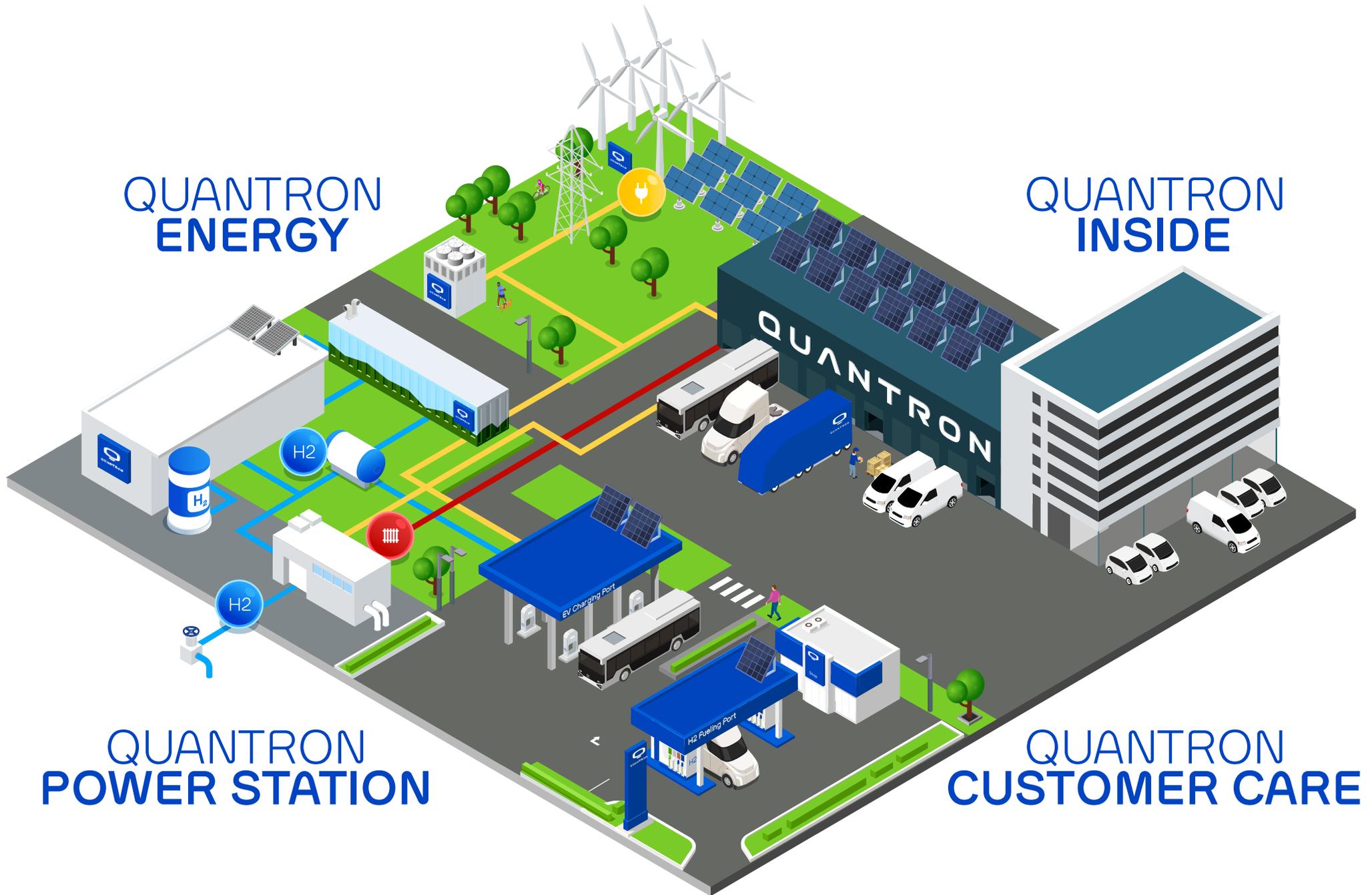
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**QUANTRON
ENERGY**

**QUANTRON
INSIDE**

**QUANTRON
POWER STATION**

**QUANTRON
CUSTOMER CARE**



Quantron-as-a-Service

Quantron-as-as-Service: QUANTRON as a solution provider, offering an asset light solution that includes all facets of the mobility value chain i.e., vehicle, service & maintenance, insurance, finance, charging infrastructure and hydrogen, amongst others - a one-stop shop for emission free mobility solutions. Offered as a Pay-as-you-go model and tailored to meet the specific requirements of our customers. Non-binding subject to terms & conditions.

QUANTRON INSIDE

All our commercial vehicles are based on the highly innovative QUANTRON Inside technology.

QUANTRON POWER STATION

In the future, we want to realize the production of green hydrogen and electricity as a platform for H2 solutions.

QUANTRON ENERGY

With our QUANTRON filling stations we will offer zero-emission charging solutions for BEV and FCEV.

QUANTRON CUSTOMER CARE

We offer comprehensive consulting services for the operation of your climate-neutral fleet. This includes topics such as the appropriate charging infrastructure as well as rental, financing and leasing options.

QUANTRON – The innovative zero emission platform



Q-Benefit



Ecological and economical: everything from a single source, cost savings, ideal for stop-and-go operations, new delivery potential, more efficient processes, improved working environment.



Q-Consulting

Individual analysis of the status quo: vehicles, cargo, route profiles, range, charging infrastructure, energy concepts as well as performance audit: cost analysis (expenditure, savings), government subsidies, financing. Application for possible individual-based funding.



Q-Truck & Bus

Industry-specific solutions according to the individual deployment profile: model, design, equipment, performance, range. Thanks to our own e-engineering, special solutions can also be realised.



Q-Power

Battery solutions ranging from A for selecting the most appropriate battery capacity through to Z for putting together individual battery configurations. Very high availability.



Q-Charge

Green power and intelligent charging solutions (charging stations at your premises and, for example, at unloading points on the way) to increase efficiency and to minimize charging times and costs.



Q-Finance



Individual solutions for renting, buying, financing and leasing in order to be cost-efficient on the road with your Q-Truck.



Q-Service



The focus is on economic efficiency, flexibility and mobility for the customer. Service, maintenance and repair with reliability and quality at over 700 service points strategically positioned across Europe.



Q-Experience

Over 140 years of experience in the commercial vehicle business of the Haller Group. We know the vehicles, market and requirements.



Q-Emotion



Resource conservation thanks to remanufacturing. Quiet and emission-free driving. Immediate maximum torque from a stationary position. Compensation for CO2 emissions from battery production by converting used and existing vehicles.

Global availability with a strong network of QUANTRON offices and 700 service partners



Quantron AG Headquarter

Augsburg, Germany 

Offices

- Ulm, Germany
- Sulzemoos, Germany
- Vienna, Austria
- Madrid, Spain
- Barcelona, Spain
- Bologna, Italy
- Warsaw, Poland
- Oslo, Norway
- Schaffhausen, Switzerland
- Delaware, USA
- Detroit, USA
- Tel-Aviv, Israel
- Lagos, Nigeria
- Hongkong, HK
- Rio de Janeiro, Brazil

Full-Service workshop concept:
Service, maintenance and repair at the highest level.
No matter if transporter, bus or truck. For all manufacturers.



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