### E-DIAG CHARGER



#### **E-DIAG CHARGER**

It is an advanced **recharge and diagnosis** mobile device, which meets the current needs of workshops and allows facing better any issue related to the **maintenance and management of electric and hybrid vehicles**, **plug-ins included**.

It allows recharging in both direct and alternating current (DC and AC up to 800 V), so vehicle repairers can try the two types of vehicle power supply effectively. It is available in **three power variants: 22 kW, 30 kW or 60 kW**. Its innovative diagnostic functionality is very important. It **allows checking the state of health of the battery** and of the systems involved in the charging process, thanks to the **NAVIGATOR NANO SERVICE diagnostic module**, provided as a standard. Moreover, workshops can obtain another document related to the battery state of health through a certificate that can be requested with a simple click directly on the tool. This service will be particularly useful for customers who require it.

It is a reliable and versatile solution that easily adapts to different operating situations and is able to adjust the charging power automatically based on the capacity provided by the workshop's electrical system.

E-DIAG CHARGER can also be equipped with the **Smart Battery Charger Unit** module, capable of managing the recharge, maintaining and diagnosing 12 and 24 V batteries.



CERTIFIED

Certified in accordance with the following regulations: IEC 61851-1

IEC 61851-23 EN 62311 IEC 61851-21-2 EN 300 328 EN 301 489-1 EN 301 489-17

#### 10" touchscreen display industrial

### VCI NAVIGATOR NANO SERVICE included for vehicle diagnosis

Smart Battery Charger Unit 12-24V Optional Windows operating system

**Multifunction LEDs**High visibility

AC charging cable (3 m) Type 2

Power cable (8 m) with 32 A, 63 A, 125 A mobile plug based on the station's power variant

BATTERY STATE
OF HEALTH
Standard report
Accredited certificate

Off-road rear wheels and front soft wheels



**Emergency stop** button

DC charging cable (3 m) CCS 2 Combo

Recharge report Printable

3 power variants 22 kW 30 kW 60 kW

Steel body 67x112x74 cm Weight 110-150kg based on the power

Wi-Fi and Bluetooth connection

### E-DIAG CHARGER includes many functions:

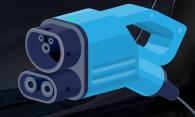
- 1. Recharge of the battery in BEVs, PHEVs up to 800 V
- 2. Battery electronic system serial diagnosis
- 3. Battery charging system serial diagnosis
- 4. Recharge and diagnosis of 12 and 24 V batteries
- **5. Special Functions**
- 6. Traction battery state of health check and certification

#### Recharge

E-DIAG CHARGER allows recharging batteries in Battery Electric Vehicles (BEV) and Plug-in Hybrid Electric Vehicles (PHEV), with the possibility to recharge both in AC via Type 2 connector and in Direct Current (DC) via CCS2 Combo connector.



AC TYPE 2

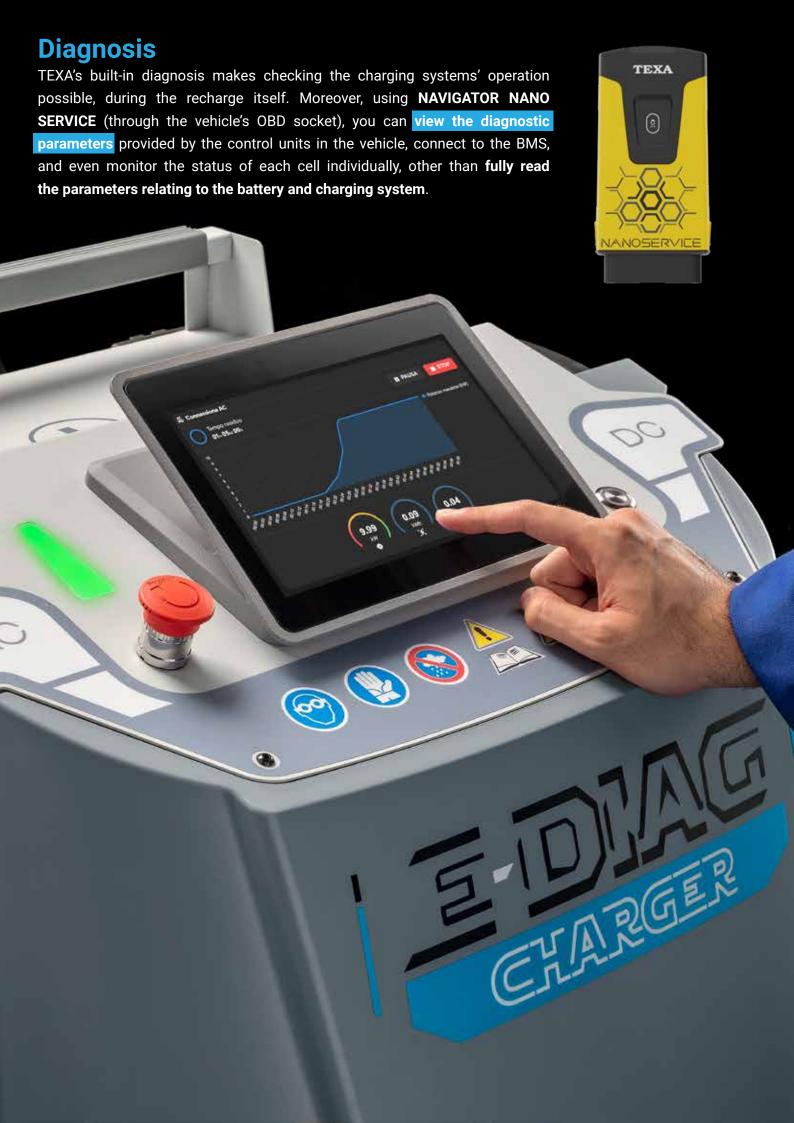


DC CCS2 COMBO

The available power, based on the model, of **22 kW**, **30 kW** or **60 kW**, allows managing the recharging process quickly, thus optimising action times in the workshop. These powers require the use of power cables with a mobile plug, respectively **32 A**, **63 A** or **125 A**.



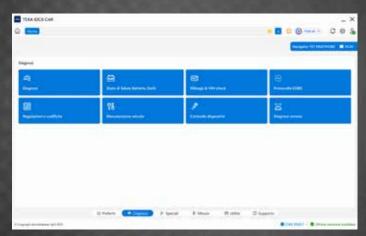




#### **Battery State of Health (SoH)**

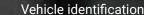
In the field of electric and hybrid vehicles it is increasingly important, from the point of view of both mechanics and car drivers, to precisely evaluate the state of health of the traction battery and the duration of the main components on board the vehicle.

In this sense TEXA developed a process that returns an accurate percentage valuation of the battery 's State of Health (SoH), through the parameters obtained directly from the control units and processed in cloud. This procedure is a standard in E-DIAG CHARGER. Furthermore, mechanics who want to offer their customers an accredited certificate relating to the battery state of health can request it directly from the tool. They will receive it within a few minutes at their email address.



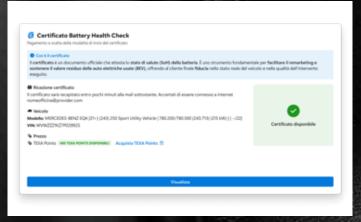
State of Section (Social Secti

Selection menu





Dashboard with battery status

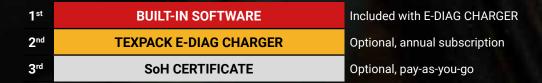


State of Health certificate by an accredited party available upon payment

#### Certification for the battery state of health

- Workshop certificate: vehicle repairers who own a TEXPACK E-DIAG CHARGER can provide customers with a certificate on the battery state of health with their own header. Service included in the TEXPACK E-DIAG CHARGER subscription.
- Accredited certificate: it is the same certificate as the workshop's, but it is accredited by a third party.

  The accredited certificate is a paid service, charged on a pay-as-you-go basis, and reserved to the customers who own a TEXPACK E-DIAG CHARGER.











#### Recharge and diagnosis never seen before With a 10" multi-touch display

E-DIAG CHARGER is equipped with a **10**" multi-touch colour display, which guarantees great useability and a clear view on the operations to complete. Very interesting is its glove-touch technology, which ensures perfect use even if the operator is wearing gloves.



#### Direct access to the most useful operations

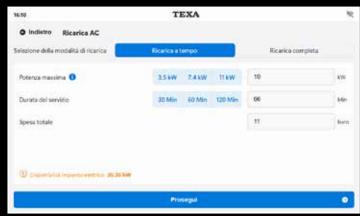
#### Thanks to a simple and intuitive software

The E-DIAG CHARGER software, developed based on Windows, provides all the information the user needs in a single screen so to have direct access to the most useful information. The easy-to-navigate menu exploits the wide display and reduces to a minimum the various operating steps: in next to no time, you will move from the initial activation phases to carrying out the diagnosis or charging services.

Below there is a summary of the main software screens, from the selection of the service to the diagnosis and charging phases:



Intelligent vehicle selection in automatic VIN SCAN 2.0 Selection of the timed or complete charging mode mode or guided by make and model

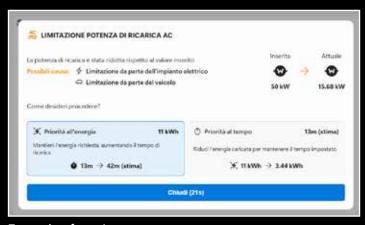




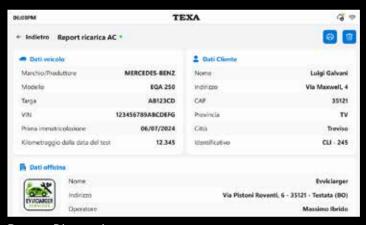
Charging service in AC mode



Charging service in DC mode with status messages



Example of service messages



**Battery Diagnosis** 



#### Power supply and energy management

E-DIAG CHARGER is powered by an industrial three-phase power socket in the workshop's electrical system. It allows **charging two vehicles simultaneously, one in AC and the other in DC**, with settable power thresholds. Furthermore, it can manage the **automatic adjustment** via accessory **(PLC ENERGY METER)** of the maximum **charging power** on the two branches avoiding untimely disconnections due to overdraw or the interventions of protections in the device's electrical power system and respecting the maximum power that can be used in the workshop's system.



#### Design and mobility

As by TEXA's tradition, during the project phase, special attention was given to the design and useability of the product, which were made clear through the well-finished and captivating contours, though preserving the practicality and immediateness of use. The structure, equipped with two practical castor wheels, can be moved easily and can therefore be used in small-sized workshops also.



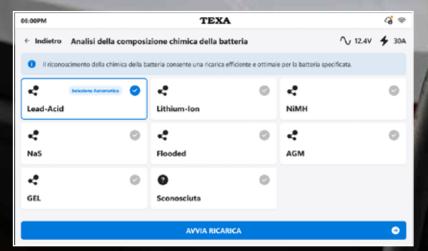
# Smart Battery Charger Unit kit Ideal for working on all vehicles with 12 and 24 V batteries

E-DIAG CHARGER can be equipped with an additional Smart Battery Charger Unit (optional) module that allows extending the diagnosis and recharge of 12 and 24 V starter batteries, thus making the station evolve into a universal and complete device as for the vehicle's service and traction batteries.

In this configuration E-DIAG CHARGER offers four new methods of use: charger, analyser, "Flashing mode" maintainer and recovery of deteriorated batteries\*, where possible, ideal for intervening on all endothermic engines, electric or hybrid motors with 12 and 24 V batteries.

Using the **EIS** (Electrochemical Impedance Spectroscopy) technology it can identify the type of battery and analyse the chemical reactions in the cells.

Once the battery is recognised, the operator receives tips on how to manage it at best, thanks to the data contained in the database that can be consulted directly from the display with all the useful information, including a step-by-step guide.



Analysis of the chemical composition of the starter battery

\*For deteriorated batteries there is a **desulphurisation cycle** that, through high-frequency electrical stimulations, removes deposits of lead sulphide from the plates, regenerating the battery's functionality.



## Perfect voltage, even during the self-diagnosis phase

Smart Battery Charger Unit is suitable for use in the workshop, also because it maintains the battery at a perfectly stabilised voltage during the crucial phases of the maintenance activities, such as when you need to locate a failure using self-diagnosis, reprogram one or more control units, calibrate the ADAS, etc. The diagnostic work in this mode, called flashing mode, allows meeting the manufacturers' recommendations. TEXA always has safety in mind, for this reason it developed special clamps equipped with thermocouples that measure the temperature of the battery terminals. This ensures that the charging phases are carried out in complete safety, thanks to a system that immediately blocks the charge if there are abnormal temperature levels, such as if the clamps are not properly positioned on the terminals.



#### **OPERATING MODE**

Smart Battery Charger Unit offers the following new functions:

- AUTOMATIC and MANUAL charge (with terminal temperature check during the charge)
- Battery analyser (for the automatic identification of the battery's chemistry and status)
- Battery optimiser (specific charging curve for any type of battery chemistry)
- "Flashing mode" maintainer and "showroom" mode maintainer (up to 120 A)
- Tester (through the Kevin method for voltage measuring)
- Power adapter (from 11.5 Vdc to 26 Vdc)
- Diagnosis and adjustments (programming of a new battery in the ECU)
- Remote control (via a Wi-Fi connection)



#### **Technical features**



#### **Technical data**

#### E-DIAG CHARGER











Power				
	22 kW	30 kW	60 kW	3 kW
Environmental conditions				
Operating temperature	-40 °C $\sim$ +60 °C, reduction required with temperature >50 °C			-40 °C $\sim$ +60 °C, reduction required with temperature >50 °C
Storage temperature	-40 °C ~ +70 °C			-40 °C ~ +70°C
Operating relative humidity	≤90% RH, without condensation			≤90% RH, without condensation
Operating altitude	2,000 m at sea level			
Protection level	IP41			<del>_</del> ;
Maximum operating noise	< 69 dB at a distance of 1 m			_
Alternating current power supply				
Three-phase mains power socket IEC 60309	32A	63A	125A	
Length of power cable		8m		
Power distribution	3P + N + PE			
Operating supply voltage		380480 VAC +6%/-10%	ı	90-264VAC
Nominal input current	32A	44A	87A	
Maximum power supply	22 kVA	30 kVA	60 kVA	_
Operating frequency		50/60Hz		50/60Hz
Absorption in stand-by mode		≤ 350 VA		
Electrical efficiency		≥ 94%		 ≥ 91%
Power factor at full load		≥ 95%		≥ 95% / 230 VAC, 0.98 / 115 VAC at full load
Direct current output				
Voltage values		150 Vdc ~ 1000 Vdc		5 Vdc ~ 26Vdc
Current values	0 ~ 100 A	0 ~ 100 A	0 ~ 200 A	0 ~ 125 A
DC charging connector		CCS2		_
Length of DC charging cable		3,3 m		
Alternating current output				
AC charging connector		TYPE 2		_
Length of AC charging cable		3,3 m		
Reference regulations				
	IEC 61851-1 IEC 61851-23 IEC 61851-21-2 CCS2 DIN 70121:2012 ISO 15118:2013 ISO 15118:2010			EN 62368-1 EN 55032 EN 61000-3-2 EN 61000-3-3 EN 55035: 2017/A11: 2020 IEC 61000-4-2,3,4,5,6,8,11
User interface, control and communication				
Display	TFT 10.1" display Gorilla® Glass, Resolution: 1024x600			
Connectivity	IEEE 802.11a/b/g/n/ac/ax Wi-Fi 6E and Bluetooth 5.3			USB Type B
Operating system	Windows 11 IoT Enterprise LTSC			
Mechanical dimensions				
Dimensions (L x A x P)		668 x 1123 x 744 mm		390 x 470 x 105 mm
Weight	110 kg	120 kg	150 kg	8 kg

# Simplifying the present, anticipating the future



Founded in 1992 60,000 covered sq. m in an area of over 100.000 mq 2 new plants



7 subsidiaries in the world



Approximately 1,000 TEXA employees in the world over 400 technical profiles



700 Distributors over 200,000 active customer workshops



Patents 85 Master, 165 total



Certifications: ISO 9001 IATF 16949 E.P.A. ISO/IEC27001 TISAX ISO 14001:2015

#### **WARNING**

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TEXA S.p.A.

Via 1 Maggio, 9 31050 Monastier di Treviso Treviso - ITALY Tel. +39 0422 791311 Fax +39 0422 791300 www.texa.com - info.it@texa.com

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