Easy Chester

Generation FLEX for CCS, NACS & CHAdeMO with the Variants mobile, EOL & Eichrecht

comemso

Contents

The new champion in electromobility

The new Easy Chester, previously called “Mini-Charger-Tester”, is designed for mobile use in the field, for service and maintenance. This easy charger tester completely redesigned generation, which includes Flex technology, is operated intuitively via a touchscreen and also provides comprehensive reports.

The easy-to-use charging station tester

The number of charging stations in the field is increasing, and so is the cost of maintaining them. To ensure that a charging station works as expected, a final functionality test is essential after installation, a service interval or repairs have been carried out. The testers often use two different vehicles to test the charging stations, e.g. one with a CCS connection and the other with CHAdeMO.

To simplify these tests and obtain reliable and reproducible results, comemso offers the portable Easy Chester. The tester can simulate vehicle signals, communication protocols and the output of a small vehicle battery for the charging standards DC-CCS, NACS and CHAdeMO, as well as AC on request (but without load circuit).

The test results are displayed in real time on the touchscreen and can be saved in the device. The Easy Chester can therefore simulate two vehicles with different charging standards, all in an ultra-portable, very easy-to-use device with meaningful test reports. It also provides a standardized vehicle behaviour, as opposed to the individual behaviours of various vehicle brands.

Testing of electrical systems

Testing electrical systems is a very important and preventative tool for increasing reliability and service life.

The standards of the last few decades have enormously increased the requirements for electrical installations. As a result, the importance of testing electrical devices for the field of electrical installation technology has developed into a very important line of work in its own right in the area of electrical installation technology. The following three standards are highly relevant for testing in the field, this means also on site at the respective charging station.

Standards

- **Initial tests – DIN VDE 0100-600**

  The initial tests are carried out to determine whether the protection of people and property is guaranteed. The test is intended to detect defects that may have been caused during the installation or operation of electrical systems.

- **Periodic testing – DIN VDE 0105-100**

  Periodic inspections at fixed intervals intended to determine the condition of electrical installations.

- **Testing after repair or modification – DIN VDE 0701-0702**

  Testing the electrical safety of electrical devices after repair work and modifications, for example, is regulated by the DIN VDE 0701-0702 standard „Testing after repair, modifications“. There are time specifications for the inspections - for charging stations these are inspections due after one year.

The initial and periodic inspection is not just a matter of safety. Early defects and sources of danger can be detected and resolved thanks to thorough testing procedures.

The advantage of this process is the early detection of initial damage, ageing processes and thus also preventive measures for major repairs.

The new generation Flex

Thanks to the new Flex technology, our systems have a completely new structure, making them even more compact and flexible. In the new generation, this innovation has also found its way into our Easy Chester.

The breakdown of functions into individual, handy card modules means that upgrades are now even easier and maintenance is even more convenient. For example, if you send in a card module, you will immediately receive a replacement module from us in return. This saves a lot of time and prevents long downtimes.

3D-Render Easy Chester with Flex-Technology

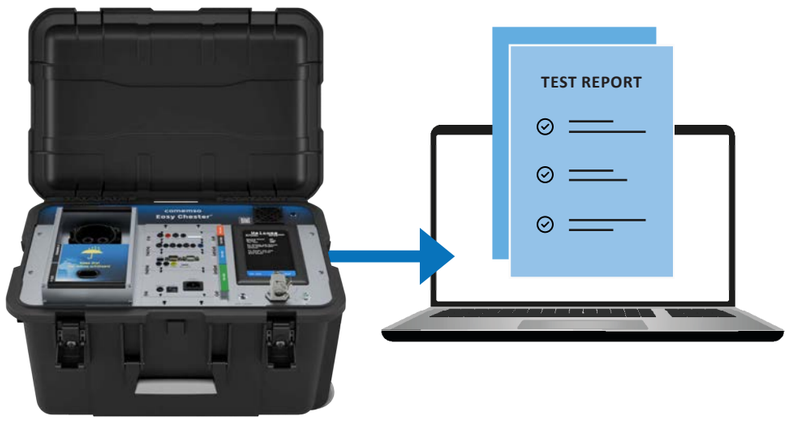
Testing charging stations the easy way

Operating the Easy Chester is as simple as can be

- Connect the charging cable and press Start to initiate the test
- Track the results on the display

A large memory to save all data even after maintenance

- The Easy Chester offers plenty of memory capacity to store all data
- Evaluate the protocols later from your computer or print them out whenever you like

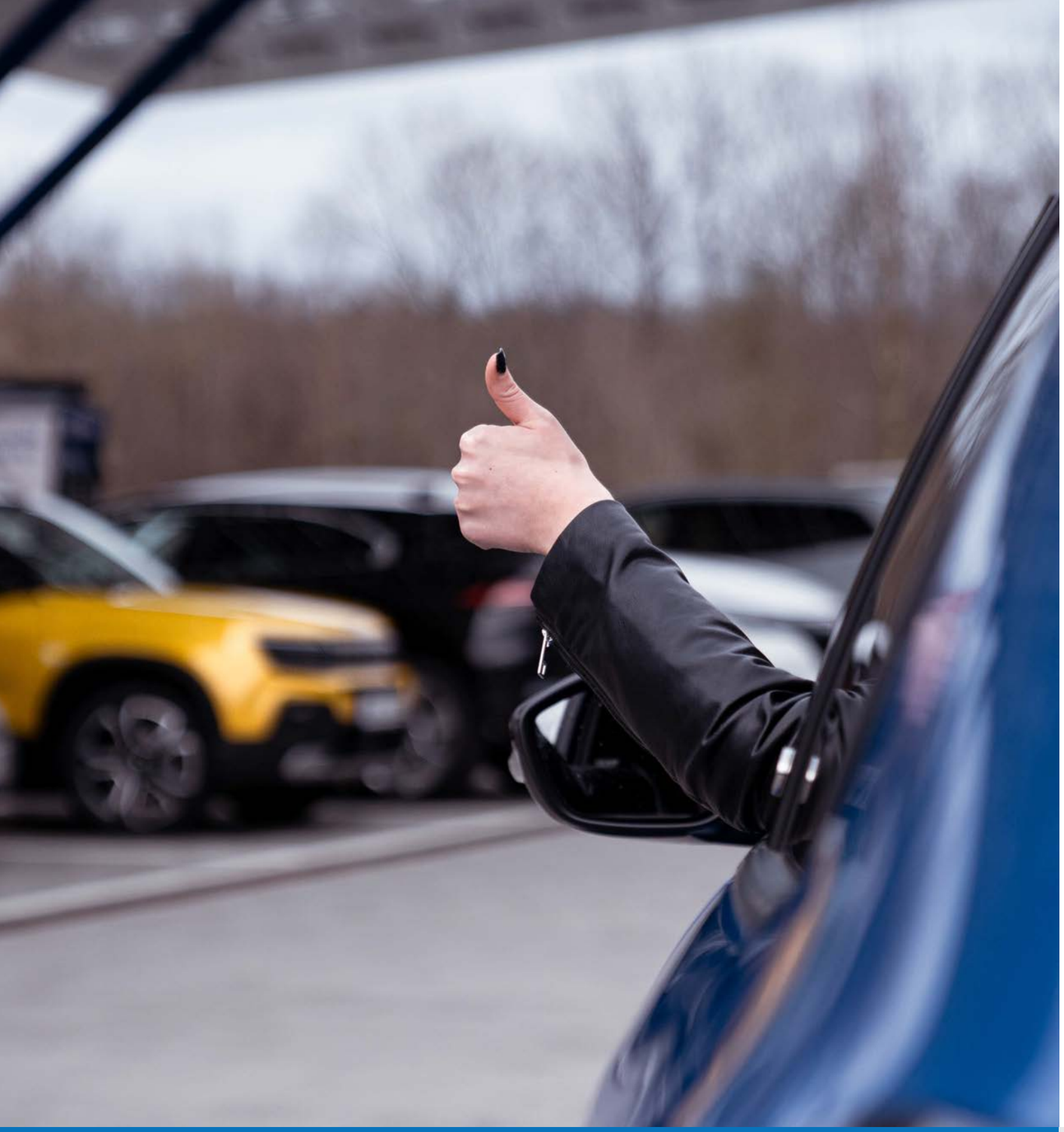


Power supply made easy

When the charging station has a service panel with an integrated socket, the Easy Chester can be easily operated via this socket (85 - 245 V AC).

With a 1 kW sine wave inverter that can be connected to a 12 V cigarette lighter, the Easy Chester is also easy to operate from a car.

DESIGNED FOR
FIELD USE



Innovation that inspires

With the Mini-Charger-Tester, comemso is the **winner of the 2019 Innovation Award** of the district of Esslingen (Baden-Württemberg). These and other innovations live on in the new Easy Chester.

Innovationspreis 2019
des Landkreises Esslingen

1. **The Easy Chester simulates two different electric vehicles**

   With the Easy Chester, you don‘t need a vehicle for testing, as the device can simulate up to two different vehicles.

2. **Comprehensive EV simulation**

   Fully automatic EV simulation regarding communication and the DC load circuit.

3. **Results in real time**

   Test results are displayed in real time on the touchscreen and are also saved in the device.

4. **Portability**

   The Easy Chester is equipped with transport wheels and handles, making it ideal for mobile use.

5. **No computer required on site**

   No computer is required for on-site testing thanks to the built-in touch display.

6. **Recognizing the limits of the charging station**

   What is the true charging capacity? The charging station communicates the possible charging capacity to the Easy Chester, from where it is documented and can also be viewed in the test report.

7. **Advantages of simulated test vehicles**

   By simulating vehicles, it is possible to provide comprehensive test results for service technicians. With a vehicle, this would be quite a challenge.

8. **Supports various recurring safety tests**

   Leakage current, CP short circuit, PE line break, insulation monitor test, CP communication signal short circuit.

9. **Test report featuring your own company logo**

   You have the option of generating your test reports with your own company logo, giving them a personal touch.

Benefit from manufacturer-independent tests and check whether EVSEs can charge and function safely.

As the Easy Chester was developed specifically for service technicians and not for development purposes, the Easy Chester is expected to conform to the EVSE standard.

Easy Chester in detail

Our Easy Chester can be adapted to your individual requirements. You will find options for personalized configuration in the chart below:

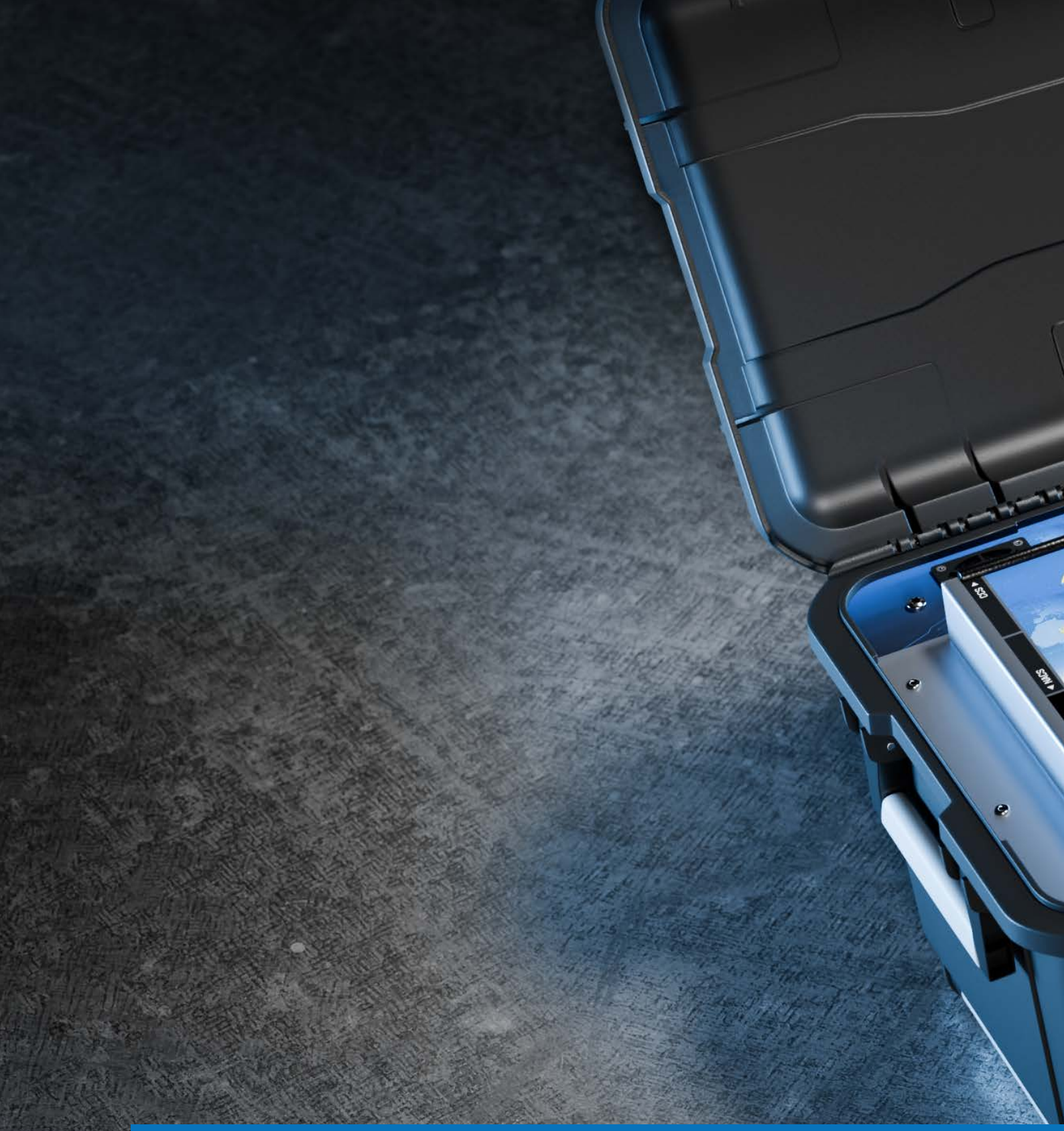
- Portable device for field use
- Charging test with approx. 1.8 kW
- Adjustable charging time ranging between 30 seconds (standard) and 60 minutes (requires our additionally available Long Duration Load Extension)

Konfiguration

NAME	ITEM NUMBER	DC-CCS COMBO 1	DC-CCS COMBO 2	CHADEMO	DC-NACS	AC TYP 1	AC TYP 2	POWER TRANSFER DURING EV SIMULATION	ISO. FAULT SIM.	FEATURE AC PLC	REPORT FILE
Combined 1 +F	118-1-005	•		•				appx. 300 V, 6 A	•		•
Combined 2 +F	118-1-006		•	•				appx. 300 V, 6 A	•		•
DC-CCS 1 +F	118-1-001	•						appx. 300 V, 6 A	•		•
DC-CCS 2 +F	118-1-002		•					appx. 300 V, 6 A	•		•
DC-CCS 1 + 2 +F	118-1-003	•	•					appx. 300 V, 6 A	•		•
CHAdeMO +F	118-1-004			•				appx. 300 V, 6 A	•		•
Combined 1 +AC, +PLC +F	118-1-010	•		•		•		appx. 300 V, 6 A	•	•	•
Combined 2 +AC +PLC, +F	118-1-011		•	•			•	appx. 300 V, 6 A	•	•	•
DC-CCS 1 +AC +PLC +F	118-1-007	•				•		appx. 300 V, 6 A	•	•	•
DC-CCS 2 +AC +PLC +F	118-1-008		•				•	appx. 300 V, 6 A	•	•	•
DC-CCS 1 + 2 +AC +PLC +F	118-1-009	•	•			•	•	appx. 300 V, 6 A	•	•	•
DC-NACS +F	118-1-013				•			appx. 300 V, 6 A	•		•
DC-NACS +CCS1 +AC +PLC +F	118-1-012	•			•	•		appx. 300 V, 6 A	•	•	•
MAINTENANCE & SERVICES											
1 year	118-7-002										
Calibration ISO 17025	118-8-001										
Long-Duration-Load-Extension	118-1-060										
TRAINING											
Training video	910-1-026										

Technical data

GENERAL	
AC power supply voltage	85 - 245 V AC (Input), Suitcase version can be connected to a 12 V DC cigarette lighter via an inverter (inverter not included).
Size (W x H x D) / Weight	600 x 330 x 400 mm / 16 Kg
Operating temperature	- 15 .. + 40 °C
Results	On display and PDF report stored in device.
Test / analysis standards	CHAdeMO: Ver. 0.9.1, 1.0.0, 1.0.1, 1.1 und 1.2, DC-CCS, NACS: DIN 70121 as well as AC for ISO 15118 on demand. Can be changed by configuration via touchscreen.
Power consumption	max. 500 VA, in rush current higher
Inrush current	CHAdeMO: appx. 10.7 A, DC-CCS: appx. 8.3 A
Water resistance according to IEC 60529	closed lid: IP66; open lid: IP43
MEASURING RANGE, ACCURACY ETC.	
Voltage measurement	
Range	0 .. 1000 V
Resolution (Display)	+/- 1 V
Accuracy	+/- (1 V + 0,5 % of measured value)
Voltage measurement	
Range	0 .. 7 A
Resolution (Display)	+/- 0,1 A
Accuracy	+/- 0,5 A
EV SIMULATION	
Integrated battery emulation	Resistive load with emulated battery voltage
Voltage	approx. 300 V (output)
Current	approx. 6 A
Duration charge cycle	approx. 30 sec. (Enough time to check whether the EVSE works in general.)
ISOLATION FAULT SIMULATION FOR DC-CCS	
Choose different resistors between DC+ to PE / DC- to PE	780 kOhm, 690 kOhm, 600 kOhm, 500 kOhm, 475 kOhm, 400 kOhm, 300 kOhm, 200 kOhm, 95 kOhm, 50 kOhm, 47 kOhm
MISCELLANEOUS	
Isolated Banana sockets	
DC / AC	to validate the voltage / connect AC load (up to max 32 A per phase)
Lock-Extension	for DC-CCS Inlet



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