vCTS.performance

Charging Test System for High Power

What is vCTS.performance?

The vCTS.performance is a scalable system to execute tests of charging communication in combination with the CANoe Test Packages EV and EVSE. The high charging power also allows load tests and endurance tests to be carried out. It is designed by EA Elektro-Automatik and Vector. The device under test is either an electric vehicle (EV) or an electric vehicle supply equipment (EVSE). CANoe is the associated test automation software.

Functions
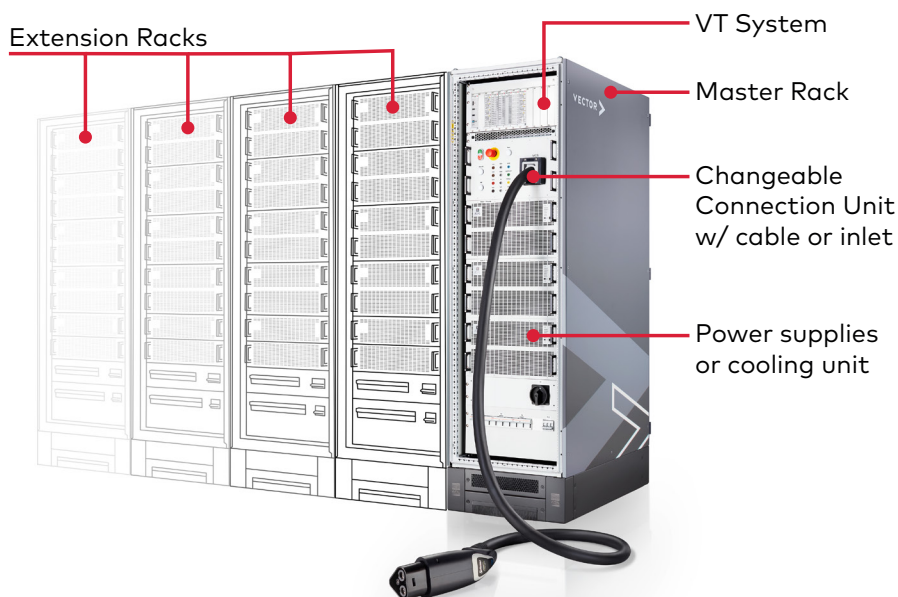
> Turnkey hardware solution for execution of conformance and interoperability tests
> vCTS.performance consists of a Master Rack with up to 180 kW and Extensions Racks with up to 300 kW each
> Support of CCS, MCS, NACS, GB/T and CHAdeMO charging communication
> Exchangeable charging connectors for adaptation to various standards

Overview of Advantages

> Comprehensive HIL system tests to ensure conformity and interoperability of charging communication as well as load tests and endurance tests with high charging power
> Scalable provision of up to 3.84 MW DC charging power including recovering energy back into the grid
> Turnkey solution with optimized design for execution of CANoe Test Package EV and EVSE, including integration to vTESTstudio workflow

Application Areas

Fully automated conformance and interoperability tests are conducted on EVs or EVSEs at full rated power, based on the CANoe Test Package EV and EVSE, following the specifications of the CCS, MCS, NACS, GB/T and CHAdeMO charging standards.

Extension Racks — VT System — Master Rack — Changeable Connection Unit w/ cable or inlet — Power supplies or cooling unit

The vCTS.performance consists of a Master Rack and optional Extension Racks that provide a total of up to 3.84 MW of DC charging power.

Technical Data

Voltage Range	0 - 1,500 V
Current Range	0 - 1,000 A (higher currents on request)
DC Power	Up to 3.84 MW in 60 kW steps
Dimensions	Master Rack > HxWxD: 2265 mm (42 U) x 600 mm (19" rack) x 1200 mm > Weight: approx. 500 kg Extension Rack > HxWxD: 2260 mm (42 U) x 600 mm (19" rack) x 1200 mm > Weight: approx. 640 kg
Input	380 - 480 V, +/- 10 %, AC 3 Phase
Efficiency	> 96 % Active power factor correction, typical 0.99 Regenerative with energy recovery back to the grid

More information: www.vector.com/vcts-performance