



Schaffner Drivelab and EMI Measurement Service



The Schaffner Drivelab is a tailored laboratory for testing and validation of Schaffner motor drive peripheral products such as EMI filters, harmonic filters, switching frequency filters and magnetic components. It offers our customers a certified and accredited laboratory infrastructure for the measurement of conducted emissions of electronic equipment according to international EMI regulations.

The laboratory infrastructure is optimized to provide an excellent and stable power supply and load conditions with lowest possible ambient interference influence towards the Equipment under Test (EUT).

The very high power level of up to 0.5 MW and the bi-directional power flow possibility makes the Schaffner Drivelab an outstanding and unique power quality and EMC testing laboratory within the industry throughout Europe.

Technical Data



Supply	630 kVA MV/LV transformer for Drivelab supply.
Voltage	230 V, 400 V, 690 V with variable earthing configuration.
Power	140 kVA on 230 V 630 kVA on 400 V 630 kVA on 690 V
Frequency	50 Hz
Load	Asynchronous motor/generator combinations. Total of 16 different power and voltage ratings. Power recuperation by regenerative motor drive with AFE via separate 630 kVA LV/MV transformer.
Motor Type	Asynchronous 4-pole standard motors for 230 V, 400 V and 690 V
Motor Rating	230 V/400 V: 0.55 kW, 1.1 kW, 2.2 kW, 5.5 kW 230 V/400 V/690 V: 11 kW, 15 kW, 22 kW, 55 kW, 110 kW 400 V/690 V: 250 kW, 500 kW
Motor Connection	Variety of dedicated motor cables up to several 100 m available
Operation	Configurable power flow from supply towards load and vice-versa possible

Infrastructure and Test Equipment

- | **Testing Area** 6 m x 4 m testing area
Height up to 3 m
- | **EUT Supply** CEE plugs for 16 A, 32 A, 63 A
Busbar connection for higher currents.
- | **LISN for EMI Testing** AC: 9 kHz to 30 MHz
LISN up to 500 A
DC: 150 kHz to 30 MHz 150 Ohm
LISN up to 200 A
- | **EMI Receiver** R&S ESR3
- | **Others** Power quality analyzer.
Temperature logging equipment for temperature rise testing.
EMI Immunity testing equipment for surge, transient, burst, ESD and conducted disturbance induced by RF fields.



Accreditation STS 0015



Schaffner EMV AG is accredited to perform conducted emission testing within the scope of STS 0015 in the premises of the Drivelab or in-situ with our mobile measurement service:

Conducted emission measurements (frequency range: $f = 9 \text{ kHz} - 30 \text{ MHz}$)

- | **EN 61000-6-3** Emission standard for residential, commercial and light-industrial environments.
- | **EN 61000-6-4** Emission standard for industrial environments.
- | **EN 55011** Industrial, scientific and medical equipment – Radiofrequency disturbance characteristics.
- | **EN 55014-1** EMC requirements for household appliances, electric tools and similar apparatus – Part 1: Emission.
- | **EN 55022** Information technology equipment – Radio disturbance characteristics.
- | **EN 61800-3** Adjustable speed electrical power drive systems – Part 3: EMC requirements and specific test methods.
- | **EN 50370-1** Product family standard for machine tools.

Test report

- | Accredited test report for conducted emission measurements.

The following measurements can be performed additionally outside of the scope of ST015

Immunity measurements

- | **EN 61000-6-1** Immunity for residential, commercial and light-industrial environments.
- | **EN 61000-6-2** Immunity for industrial environments.
- | **EN 61000-4-2** Electrostatic discharge immunity test.
- | **EN 61000-4-4** Electrical fast transient/burst immunity test.
- | **EN 61000-4-5** Surge immunity test.
- | **EN 61000-4-6** Immunity to conducted disturbances, induced by radio-frequency fields.

Test report

- | Non-accredited test report for radiated emissions and immunity measurements.