

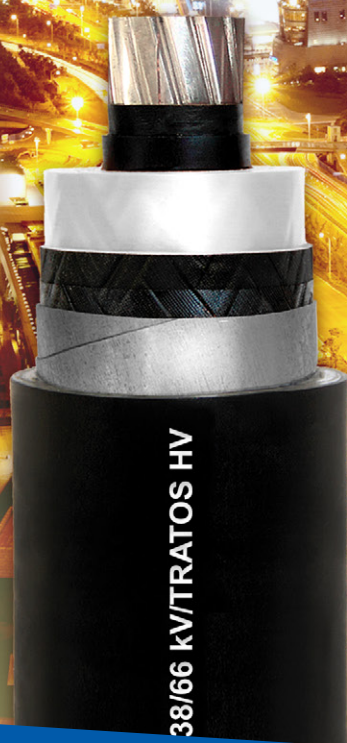
CABLES FOR A MOVING WORLD

# TRATOS HV<sup>®</sup>

based on IEC 60228, 60840 and 60811

*Tratos is an international manufacturer and supplier of **High Voltage** cables up to **245 kV**.*

*Tratos HV<sup>®</sup> cables are distinguished by an **advanced technology** and construction, which provides **flexibility, lightness** and **strength**, low maintenance and simpler accessories to the request of high voltage cables.*



[www.tratos.eu](http://www.tratos.eu)

Tratos is fully compliant with the Restriction of Hazardous Substances (RoHS) regulations, WEEE Directive and REACH. Product Certification includes requirements for Environmental issues directly relating (Iso 14001) to the Product and Manufacturing processes (Iso 9001) as well as limited Health & Safety issues directly (BS OHSAS 18001) relating to the Product and Manufacturing processes.

# Tratos Faraday Cage for High Voltage

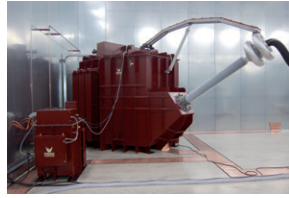
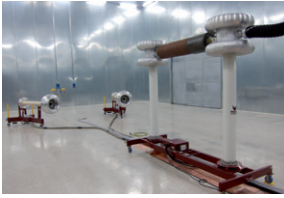
*Tratos has a brand new Faraday cage,  
the largest in Europe,  
where the cage is the building itself.*

Voltage Plugs **70 kV / 150 kV / 350 kV**

Power **10.5 MW**

Ground Electrical Noise **<0.1 pC**





## THE LARGEST FARADAY CAGE IN EUROPE

Tratos has recently completed the construction of the largest Faraday cage test site in Europe, at the company's headquarters in Pieve Santo Stefano, Italy. Measuring 24m x 16m and standing at 14m high, the new Faraday cage enables Tratos to effectively administer AC resonant tests on site, allowing testing of up to 220 kV of nominal voltage cables, of up to 20 km in length.

AC resonant testing is now the standard method of testing higher voltage cables.

However, it is vital that AC resonant tests are carried out in a controlled environment, and this is exactly what the new Faraday cage provides.

The facility incorporates a new innovative locking system to ensure perfect shielding from any sort of external interference. Inside is state of the art instrumentation and equipment for testing and an adjustable high voltage reactor which, together with the exciter and the regulator, comprise the heart of the system.

The reactor is insulated in oil and consists of two identically wound high voltage coils mounted on a platform, with a motorised drive mechanism providing variable air gaps. Its upper part includes space for oil expansion and it offers 12MW of resonance power, allowing three taps of 350kV, 150kV and 70kV. The exciter section is mounted in a separate oil-filled steel tank and contains a single phase, step-up transformer which supplies the AC voltage required for the resonant circuit. The regulator provides an adjustable input voltage to the exciter and controls

the input voltage of the reactor. This sophisticated equipment can detect even very low levels of picocoulombs and is governed by a modern control system incorporating a Programmable Logic Controller (PLC), which is designed for multiple inputs and output arrangements, immunity to electrical noise, and resistance to vibration and impact. This allows incredible precise measurements to be recorded, ensuring that the cables meet the exacting test parameters as specified in IEC 60228, 60840 and 60811.

Tratos is an international manufacturer and supplier of High & Extra High Voltage cable up to 245 kV. Since 1966, we have entered a new market segment by starting producing high voltage cables up to 220 kV. In collaboration with our suppliers of new generation joints and terminals we are able to supply turnkey projects: design, production, installation and maintenance.

Tratos HV cables are distinguished by an advanced technology and construction, which provides flexibility, lightness and strength, low maintenance and simpler accessories, which are available on request for our full range of high voltage cables.

HV cables have a variety of applications in instruments, ignition systems, AC and DC power transmission. They may be any length, with relatively short cables used in apparatus, longer cables run within buildings or as buried cables in an industrial plant or for power distribution, and the longest cables are often run as submarine cables under the ocean for power transmission.

All Tratos Quality systems and procedures are approved, via BASEC, to ISO 9001.





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