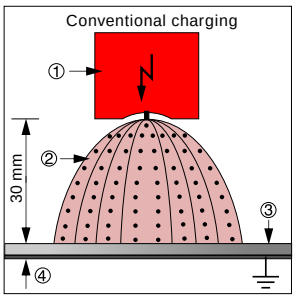
HAUG Ionization – for the application of electrostatic charges

HAUG charging systems

HAUG charging systems are intended for contact-free application of electrostatic charges. They are used wherever different materials (at least one of which must be insulating) are to be attached to each other electrostatically.
HAUG charging systems include the following components:

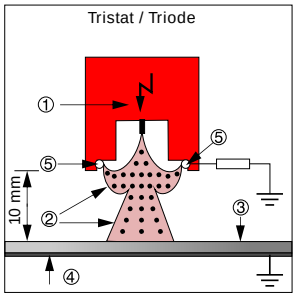
- a charging generator with adjustable direct high voltage and
- one or more connected charging triodes.

ill. 1



① Positive or negative voltage
② Electric field
③ Isolator (e.g. foil)
④ Counter electrode
(e.g. earthed metal plate)

ill. 2

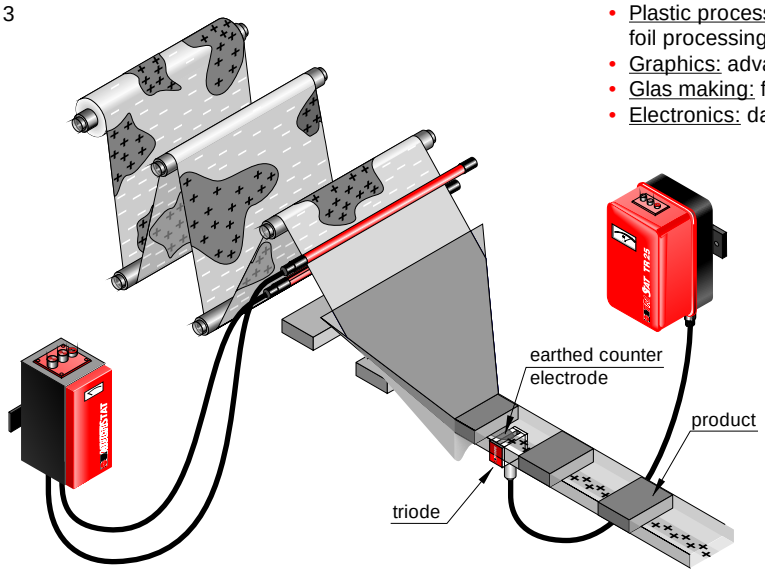


① Positive or negative voltage
② Electric field
③ Isolator (e.g. foil)
④ Counter electrode
(e.g. earthed metal plate)
⑤ Intake electrodes

Industries

- Plastic processing: packaging machines, foil extruders, foil processing equipment
- Graphics: advanced print processing
- Glas making: flat glass production
- Electronics: data carrier production

ill. 3

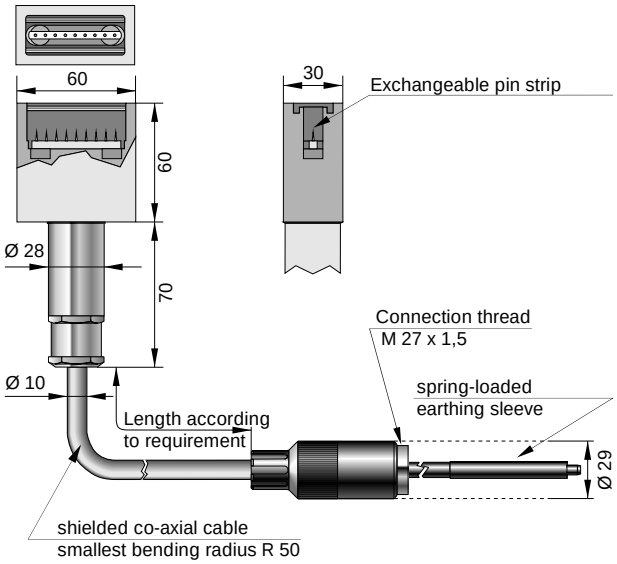


Tristat TR 25

HAUG Tristat TR 15 / TR 25

The HAUG charging generators Tristat TR 15 / TR 25 are high-voltage generators developed specifically for the supply of HAUG charging triodes type ALT, ALM and ANT. The charging triode is placed at a distance of approx. 10 – 20 mm above the material to be charged, directly opposite the counter electrode. The eathed counter electrode must be in contact with the material to be charged.
In order to achieve a continuous, operationally reliable "adhesion" of the two materials, it is important to discharge the materials to be pinned to each other before charging using a suitable HAUG ionization system (ill. 3).

Charging triode ALT



Particular characteristics TR 15/TR 25

The charging generators Tristat TR 15 / TR 25 suply an adjustable high-voltage of approx. 22 kV_{DC}. The units are available in either positive or negative polarity. In case of the TR 25, the voltage set is displayed on the integrated measuring instrument. The high-voltage can be steplessly adjusted on a potentiometer. The Tristat TR 15 / TR 25 charging generators can be pulsed using an external control.

Particular characteristics charging triode (types ALT, ALM, ANT)

HAUG charging electrodes are characterized by a very homogenous field at the charging pins. As a result of the special geometric design of the charging electrode, spark-overs to the counter electrode are impossible. The charging electrode can therefore be mounted at a distance of as little as approx. 10 mm from the material to be charged. The charging electrode provides a very high charge even at low voltages and thus ensures very good adhesion.
Due to their simple design using magnetic clamps, worn charging pins can be easily exchanged. The charging triode is connected using a shielded high-voltage cable.

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Comparison TR 15 / TR 25

Characteristics	TR 15	TR 25
Fixed pulse cable	•	–
Pulse socket	–	•
Pulse operation via floating normally open contact	•	•
High-voltage display	–	•

Tristat TR 15

Technical data Tristat TR 15

Type of protection: IP 54
Protection class: I
Supply voltage: 115 V_{AC} / 230 V_{AC} (50 – 60 Hz)
Rated output voltage: approx. 22 kV_{DC}
Short circuit output current: I_k = 3 mA
HV-terminals: 1
Power input: max. 40 VA
Pulse frequency: 1 Hz, pulse via floating normally open contact
Operating temperature: +5 °C to +45 °C
Storage/transport temperature: -15 °C to +60 °C
Weight: 7 kg
Mains cable: 2,6 m, fixed to the device

Subject to technical changes!

Types TR 15 / TR 25

TR 15 (230 V), positive	Order-No.: 09.7640.000
TR 15 (115 V), positive	Order-No.: 09.7641.000
TR 15 (230 V), negative	Order-No.: 09.7642.000
TR 15 (115 V), negative	Order-No.: 09.7643.000
TR 25 (230 V), positive	Order-No.: 09.7650.000
TR 25 (115 V), positive	Order-No.: 09.7651.000
TR 25 (230 V), negative	Order-No.: 09.7652.000
TR 25 (115 V), negative	Order-No.: 09.7653.000

Accessories TR 25

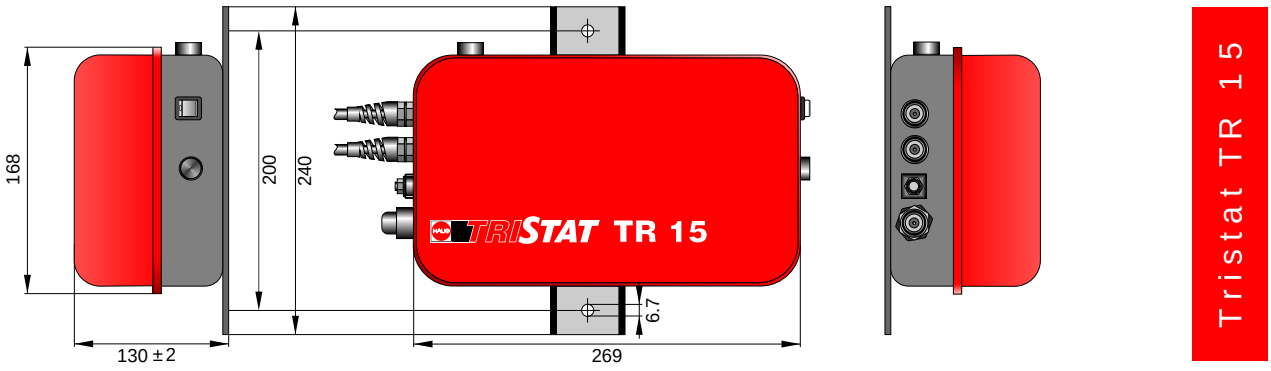
Signalling cable K1, shielded	
5 m, incl. round plug	Order-No.: 06.8941.000
10 m, incl. round plug	Order-No.: 06.8941.001
20 m, incl. round plug	Order-No.: 06.8941.002
Round plug	Order-No.: X-0616
Angled plug	Order-No.: X-5718

Tristat TR 25

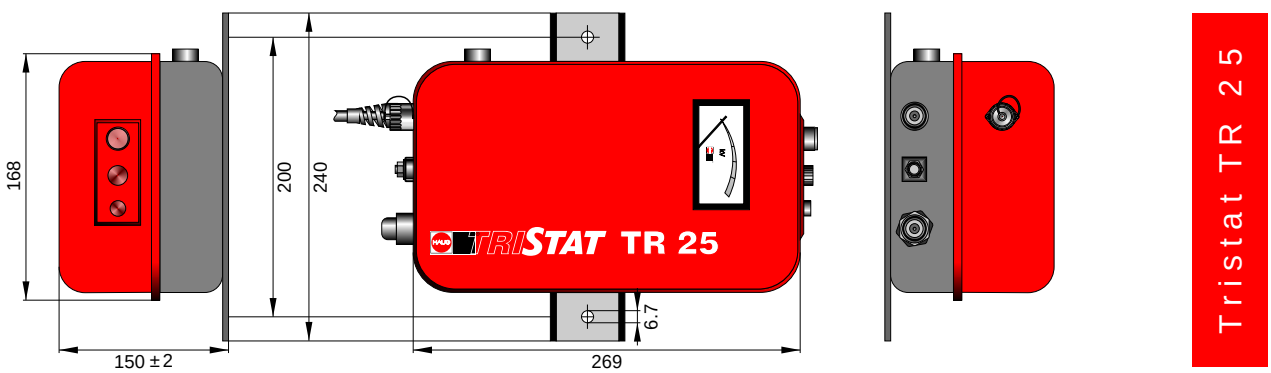
Technical data Tristat TR 25

Type of protection: IP 54
Protection class: I
Supply voltage: 115 V_{AC} / 230 V_{AC} (50 – 60 Hz)
Rated output voltage: approx. 22 kV_{DC}
Short circuit output current: I_k = 3 mA
HV-terminals: 1
Power input: max. 40 VA
Pulse frequency: 1 Hz, pulse via floating normally open contact
Operating temperature: +5 °C to +45 °C
Storage/transport temperature: -15 °C to +60 °C
Weight: 7 kg
Mains cable: 2,6 m, fixed to the device

Subject to technical changes!



Tristat TR 15



Tristat TR 25