# Earth rod comparison and selection guide

Galvanised, copper-bonded, solid copper and 304L and 316 stainless steel side by side

KALOT EARTH RODS · GVER · ERCB · SCER · SSER 304L / 316

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## 316 stainless steel earth rod

**SSER** Austenitic stainless steel with molybdenum



**Sizes**
Diameters of 16 and 20; lengths of 1500 and 2000

**Weight per 1500 mm length**
2.38 and 3.72 kg

**Joining lengths**
Integral dowel; first earth rod and extension earth rods

**Installation method**
Driven; borehole in rocky soil

| | |
|---|---|
| ●●●●● | Corrosion resistance |
| ●●●●● | Saline and chloride soil |
| ○●●●● | Next to buried steel |
| ○●●●● | Ease of driving |
| ○$$$$ | Relative cost |

**Best choice for**
Coastal areas, saline and chloride soils and chemical plants; projects that call for IEC requirements.

## 304L stainless steel earth rod

**SSER** Low-carbon austenitic stainless steel



**Sizes**
Diameters of 16 and 20; lengths of 1500 and 2000

**Weight per 1500 mm length**
2.36 and 3.70 kg

**Joining lengths**
Integral dowel; first earth rod and extension earth rods

**Installation method**
Driven; borehole in rocky soil

| | |
|---|---|
| ○●●●● | Corrosion resistance |
| ○○●●● | Saline and chloride soil |
| ○●●●● | Next to buried steel |
| ○●●●● | Ease of driving |
| ○○$$$ | Relative cost |

**Best choice for**
Next to buried steel foundations, pipes and tanks; low-salt, well-drained soil.

## Solid copper earth rod

**SCER** Copper throughout the cross-section



**Sizes**
Diameters of 16 and 20; length 1500

**Weight per 1500 mm length**
2.68 and 4.19 kg

**Joining lengths**
M10 dowel; several lengths in line

**Installation method**
Borehole with ground improvement material, or driving in soft soil

| | |
|---|---|
| ●●●●● | Corrosion resistance |
| ○●●●● | Saline and chloride soil |
| ○○○●● | Next to buried steel |
| ○○○●● | Ease of driving |
| $$$$$ | Relative cost |

**Best choice for**
Saline and corrosive soils, wherever very high durability is needed; installed in a borehole.

## Copper-bonded earth rod

**ERCB** Steel core with copper coating



**Sizes**
5/8 and 3/4 inch; length 1500

**Weight per 1500 mm length**
1.95 and 2.76 kg

**Joining lengths**
Brass coupling; several lengths end to end

**Installation method**
Driven with a sledgehammer or power hammer

| | |
|---|---|
| ○●●●● | Corrosion resistance |
| ○○●●● | Saline and chloride soil |
| ○○○●● | Next to buried steel |
| ●●●●● | Ease of driving |
| ○○○$$ | Relative cost |

**Best choice for**
Most projects: buildings, substations, lightning protection and towers; driven to great depth at a sensible cost.

## Galvanised earth rod

**GVER** Steel core, hot-dip galvanised

This product



**Sizes**
Diameters of 16 and 20; lengths of 1500 and 2000

**Weight per 1500 mm length**
2.38 and 3.71 kg

**Joining lengths**
One piece; several parallel earth rods joined by galvanised conductor

**Installation method**
Driven with a driving cap, or in a borehole with GIM

| | |
|---|---|
| ○○○●● | Corrosion resistance |
| ○○○●● | Saline and chloride soil |
| ○○●●● | Next to buried steel |
| ●●●●● | Ease of driving |
| ○○○○$ | Relative cost |

**Best choice for**
All-galvanised earthing networks such as towers, fences and galvanised steel structures, and temporary site earthing; in neutral, well-drained soil.

Ratings compare these five earth rods with each other; more coins mean higher cost, based on metal prices on 21 Mehr 1405. Weights are per 1500 mm length.

Near installations with cathodic protection, coordinate the design with the cathodic protection designer.

We keep improving our products; please confirm final dimensions with our experts.

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