Electrical Metals & Components

Alcomet

SUBSTATION TEMPORARY PORTABLE EARTHING
Super Standard List

Leads
Clamps
Poles
Kits
Accessories
As an endorsement of quality and excellence, HM Queen Elizabeth II honoured Alcomet with a Queens Award for Enterprise: Innovation, expressly for the development and launch of the Guardian Security Range.

Alcomet has continued to work with the electrical market and responded to its needs by developing products such as the Triton Portable earthing device and expanding our stock range available on demand.

Alcomet is an official distributor of the P&B Weir range of Portable Earthing Equipment.

Since the acquisition of the Weir Electrical Instrument Co. Ltd. in 1992 P&B Weir Electrical has established itself as one of the leading manufacturer of Portable Earthing Equipment for use on Overhead Lines and in Substations at both Transmission and Distribution voltages.

Electrical Metals & Components

Earthing Equipment for:
Power Stations, Sub Stations, Overhead Power.
CIRCUIT MAIN EARTHS

Super Standard Make Up:

- 150mm² Clear Aluflex Lead with lugs and stress springs (standard length 10m, other lengths available upon request)
- CE20/ESI-E1 Earth End Clamp
- CE22A+B Line End Clamp

CE20/ESI-E1 Earth End Clamp

- For application to clean or dirty copper or aluminium tape
- Maximum thickness 6.5mm
- Minimum thickness 3.2mm
- Maximum width 50mm
- Minimum width 38mm
- Teste to 38kA for 2 seconds

NOTE - Recommended alternative earth end clamp is the CE21 as below.

CE22 A+B Line End Clamp

- For application to clean or dirty copper or aluminium tube, within the range: 19-76mm diameter
- Tested to 17.5kA for 2 seconds

ALTERNATIVE CLAMPS AVAILABLE:

CE21 EARTH END CLAMP

- For application to clean or dirty copper or aluminium tape
- Maximum thickness 13mm
- Minimum thickness 3.2mm
- Maximum width 50mm
- Minimum width 25mm
- Tested to 17.5kA for 2 seconds

CE22C/ESI-L3 LINE END CLAMP

- For application to clean or dirty copper or aluminium tube, within the range: 60 - 90mm diameter
- Tested to 17.5kA for 2 seconds

CE16/5/ESI-L4 LINE END CLAMP

- For application to aluminium tube of 127mm diameter only
- Provisions for attachment of three flexible leads
- Tested to 17.5kA for 2 seconds

NOTE - Alternative line end clamps are available for tube or strand not covered by the above range.
FIELD EARTHS

FIELD EARTH Super Standard Make Up:

- 50mm² Orange Aluflex Lead with lug and stress spring for the earth end and lug and plastic support sleeve for the line end (standard lengths 10m & 20m other lengths available upon request)
- CE20/ESI-E1 Earth End Clamp
- CE4 Line End Clamp

CE20/ESI-E1 Earth End Clamp

- For application to clean or dirty copper or aluminium tape
- Maximum thickness 6.5mm
- Minimum thickness 3.2mm
- Maximum width 50mm
- Minimum width 38mm
- Tested to 38kA for 2 seconds

NOTE - Recommended alternative earth end clamp is the CE21 as below.

CE4 Line End Clamp with Insulated Handle

- For application to clean or dirty copper or aluminium tube, within the range: 22 - 50mm diameter

ALTERNATIVE CLAMPS AVAILABLE:

CE21 EARTH END CLAMP

- For application to clean or dirty copper or aluminium tape
- Maximum thickness 13mm
- Minimum thickness 3.2mm
- Maximum width 50mm
- Minimum width 25mm
- Tested to 17.5kA for 2 seconds

S9A ROCKER BLOCK LINE END CLAMP with INSULATED HANDLE

- Fitted with an Aluminium Alloy Rocker Block
- For application to flat bar and round conductors
- Maximum thickness 12.7mm flat bar
- Round conductor range: 6.4 - 20mm
- Tested to 17.5kA for 2 seconds

S9A LINE END CLAMP with INSULATED HANDLE

- Fitted with a Hardened Steel Tip
- Maximum thickness 20mm flat bar
- Tested to 17.5kA for 2 seconds
IV DRAIN EARTHS

IV DRAIN EARTH

Super Standard Make Up:

• 50mm² Orange Aluflex Lead with lug and stress spring for the earth end and lug and plastic support sleeve for the line end (standard lengths 10m & 20m, other lengths available upon request)
• CE20/ESI- Earth End Clamp
• CE22A+B Line End Clamp

CE20/ESI-E1 Earth End Clamp

• For application to clean or dirty copper or aluminium tape
• Maximum thickness 6.5mm
• Minimum thickness 3.2mm
• Maximum width 50mm
• Minimum width 38mm
• Tested to 38kA for 2 seconds

NOTE - Recommended alternative earth end clamp is the CE21 as below.

CE22 A+B Line End Clamp

• For application to clean or dirty copper or aluminium tube, within the range: 19-76mm diameter
• Tested to 17.5kA for 2 seconds

ALTERNATIVE CLAMPS AVAILABLE:

CE21 EARTH END CLAMP

• For application to clean or dirty copper or aluminium tape
• Maximum thickness 13mm
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• Maximum width 50mm
• Minimum width 25mm
• Tested to 17.5kA for 2 seconds

CE22C/ESI-L3 LINE END CLAMP

• For application to clean or dirty copper or aluminium tube, within the range: 60 - 90mm diameter
• Tested to 17.5kA for 2 seconds

CE16/5/ESI-L4 LINE END CLAMP

• For application to aluminium tube of 127mm diameter only
• Provisions for attachment of three flexible leads
• Tested to 17.5kA for 2 seconds

NOTE - Alternative line end clamps are available for tube or strand not covered by the above range

tel: 01384 404488 I www.alcomet.net
OPERATING POLE

Our operating poles are manufactured from a lightweight resin-impregnated fibre glass and are of a high electrical insulation grade.

Operating poles are available in:
• 1.22m Top Pole Section
• 1.22m Bottom Pole Section
• 1.22m Middle Pole Section
• 1.22m Pole Section with integrated PB331 socket
• 2.44m Top Pole Section
• 2.44m Bottom Pole Section
• 2 x 1.22m Pole Sections permanently linked by a chain

All operating poles are manufactured, tested and approved to the ENA technical specification 41/21. The poles are machined to provide rigid assembly and include double sided snap action spring locking device.

Operating poles should be limited to a maximum length of 4.88m as this is considered the maximum length that the poles can be manually handled safely.

1.22m Operating pole sets can be supplied in a PVC carrying bag.

CEA / S: ESI - S2

CEA /S ESI S2 is an alternative type to the S9D where the operating screw of the line end clamp is controlled by means of a sprung loaded plunger in the socket. This socket is for application in a downward direction and for this reason is sprung loaded to ensure the clamp does not fall out of the socket inadvertently.

S9D: ESI - S1

S9D ESI S1 supports clamps being applied in an upward direction. When the clamp is fully tightened the socket should be pushed gently up towards the clamp at the same time maintaining the tightening pressure and to which the socket will then automatically disengage.
NSI24 Temporary Earth Bond Kit

The NSI24 Temporary Earth Bond Kit is fault rated although not specifically fault rated, has been tested at 15 kA/1 sec short current rating and for a continuous current rating of 300A.

It consists of Clamp Type CE57 and associated two part operating pole. The clamp is supplied with two 8m long 50mm² aluflex leads and a CE20/2 earth end clamp. It is suitable for application to clean or oxidized aluminium or copper tape 25mm - 100mm wide.

The operating pole is supplied in two 0.6m sections. The top section is fitted with an OL1 operating socket which engages with the CE57 clamp. The top section can also be used on its own or fitted to the bottom section to extend its total length to 1.2m.

The use of either will depend upon the application and on the operator’s preference.

Earth Bonds

The Type A Earth Bond is rated to 17.5kA when used with one lead and 31.5kA when used with two leads.

The Type A Earth Bond Kit consists of a CE20/2 Ring Type and a two part hook type operating pole. These are used with CE20/2 Earth End Clamp and one or two 150mm² earth leads.

The clamp is suitable for application to clean or oxidized aluminium or copper tape 3.2mm - 6.5mm thick and 38mm - 50mm wide. The operating pole is available in two lengths, of 2m and 1.5m. These poles comprise a common top pole with two alternative bottom sections.

The CE20/2 Ring Type clamp is similar to the standard earth end clamp CE20/2, but is operated by means of a ring ended operating screw. The pole has a retractable hook end which engages with the clamp operating screw. The hook end distinguishes the pole from the other operating poles, which are used to apply portable primary earths or earth drains.
**EARTH BONDS**

A type registered bridging connection used for the purpose of providing earth continuity on earth connections.

They are clear in colour and are fully fault rated when applied in appropriate numbers.

**Type A**

- 1 x CE20/2 Ring Type Earth End Clamp
- 1 x CE20/2 Earth End Clamp
- 150mm² Clear Aluflex
- Hook Type Operating Pole
- Type A earth bond is rated to 17.5kA when used with 1 lead or 31.5kA when used with 2 leads connected by 2 CE20/2 Earth End Clamps

**NOTE** - Alternative arrangements with both the leads and clamps are available with depending on the requirements of the customer.

**Type B**

As a Type A Earth Bond except the tower end of the Earth Bond will simply have crimped ends for direct bolting to the new connection point. This is to provide protection against interference from third parties.

**ALTERNATIVE ARRANGEMENTS:**

- Type A - CE20 RT & CE20 single lead
- Type A - CE20 single lead
- Type A - CE20 double lead
- Type A - CE20 Ring Type single lead
- Type A - CE20 Ring Type double lead

For our full range of Portable Earth Leads, Clamps and Accessories go to [www.alcomet.net](http://www.alcomet.net) | 9
The aluminium clamp and Spigot system is designed to be permanently fitted to new or existing substation busbars. It accommodates up to five P & B Weir Electrical line end clamps suitable for 38mm diameter busbar, reducing the need to use a heavier range of clamps.

The Aluminium Earthing Spigot is designed to be installed easily, either during the initial erection of a new substation busbar system or subsequently, as an enhancement to an existing system.

The machined clamps are supplied in two halves which are bolted together around the busbar using the supplied fasteners and are tightened to prescribed torque settings.

With the Spigot being lightweight it makes it possible for one person to install.

A 38mm diameter Spigot and corono shield, common to all Spigot clamps and busbar sizes, is then bolted onto the clamp. This is positioned horizontally to cater for busbars at any angle from horizontal to 60 degree, before tightening to a prescribed torque setting.

The earthing Spigots fully conform to the requirements of the UK Electricity Supply Industry.

**Product Benefits include:**

- Simple to install
- Suitable for new build or retro upgrades
- No Accessories required
- Improves manual handling
- Reduces earth clamp size
- Reduces outage time

Our Spigots for 140mm busbar and larger are all approved to National Grid standard EGl code BC4MO021.
PORTABLE EARTHING ACCESSORIES

Alcomet offer a range of accessories to aid in the storage of temporary portable earthing.

Velcro Straps

45cm long double sided velcro storage strap used to secure leads whilst not in use.

Heavy Duty Storage Bags

A variety of heavy duty storage bags are available. Ideal for transporting leads or storing additional components.

Portable Earth Storage System

A practical system for storing and organising temporary portable earthing. The racking system will up to 5 leads of any configuration per unit.

For our full range of Portable Earth Leads, Clamps and Accessories go to www.alcomet.net |
Alcomet set the standard in safety

Alcomet recognise the importance of safety, all of our portable earth leads have to pass rigorous safety and performance checks before dispatch. All of our leads are resistance tested and assigned a unique identification number before they are dispatched. Ensuring that all safety records can be updated and maintained with ease.

Electrically Tested and Dated

New leads are visually inspected and ducter tested to ensure they fall within the products specific tolerance. The lead is then given a label clearly identifying the date tested, ensuring operators can easily check when the equipment was last tested.

Unique Identification

Each lead is supplied with a unique serial number, enabling easy and accurate record keeping.

Certification

Certificates containing the unique serial numbers can be provided to give complete traceability and ensure the end user can easily maintain their safety records.
Test, repair and service package

For leads in the field Alcomet also offer a routine test, repair and service package, keeping leads and clamps in good working order and extending the life of the products.

Alcomet can arrange for the leads to be collected from site, and will provide sets of substitute leads while the original leads are serviced at Alcomet’s testing facility.

Any failures are immediately quarantined and a report is issued identifying the reason for failure and whether the lead is repairable.

Alcomet can service and refurbish any leads and clamps deemed repairable, prolonging the life of the equipment, providing best value compared with replacing the equipment with new.

Leads are returned with a unique identification label, a label clearly identifying the date tested, velcro storage straps and full certification of tests undertaken.

For a cost effective, safe and reliable service choose Alcomet.
TRANSMISSION PORTABLE TEMPORARY EARTHING

Alcomet also stock an extensive range of lead and clamps used within the Transmission networks. Contact our sales team for more information.

From power generation, substation, transmission, distribution and low voltages, Alcomet supply the whole range.
Trenchlite GRP Systems

Oil Circuit Breaker Contacts

Metal Theft Protection

Portable Earth Leads

Earthing Products

Stranded Conductor

Power Connectors

Substation Products

Triton Portable Earthing Device

For our full range of Portable Earth Leads, Clamps and Accessories go to www.alcomet.net
We are constantly reviewing and updating our products, for the latest information please contact us on 01384 404488 or visit our website at: www.alcomet.net