Green Wall Systems

Climbing Plant Trellis Support
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Extra width to accommodate a lateral planting space
Superior strength to support heavier plants
Adding a new dimension to your urban landscape schemes

Greening of facades, pergolas and garden spaces is an ecologically sound method of taking your project beyond the ordinary. Greening is progressively difficult in overcrowded urban scenarios whilst its importance is ever increasing. GreenBlue offers plant climbing systems coupled with superior technical advice and active support, enabling you to bring your greened urban vision into reality. This design guide has been produced to help you simply specify the solution that is right for your scheme.

What distinguishes GreenBlue climbing system technology?

The use of climbing plants is a wonderful way to enhance living and working environments. The trellis range offers a radical and effective range of components manufactured from marine grade 316 stainless steel which are both robust and aesthetically pleasing. A wealth of experience in the product field has lead to a range of high quality, improved brackets which can be used to create radical designs – exuding architectural flare before the plant is matured and leading onto the softening and ecological statement offered by a fully established green wall.

What needs to be considered when planning your installation?

Use of a living plant makes forward planning essential. It is important not only to select the right location for a climber but the ratio of plant material to structure should also be determined and the final weight of the foliage should be taken into consideration. The climber species for your project should be the first choice – the best suited support system can then be determined.

With the GreenBlue range, there is a comprehensive choice of sleek, multifunctional, architectural brackets to compliment every type of scheme and plant species.

You can rely on GreenBlue to provide technical support from the earliest design stage to the final completed project – including CAD drawings, technical advice and on-site support. Trust GreenBlue to deliver the best urban greening solution – adding a new dimension to your project.
Series 40/60/90
Perfectly engineered to enhance your urban scheme

These brackets are manufactured from marine grade 316 stainless steel and boast a filigree effect which is enhanced by the highly polished finish.

Benefits of the Series 40
• Affordable alternative to eye-bolts.
• Aesthetically pleasing.
• Cable holders not required due to the cable attachment and tension loop.
• Wire and wall fixings included with the bracket kits.

Benefits of the Series 60 & 90
• Versatile brackets with supporting disks – for small to medium climbers.
• Prevention of the brackets’ loosening is maintained by the unique threaded join
between the base plate and the standoff bar, this allows for simple alignment of the wires and re-tensioning of the brackets using the tensioning tool.

- M10 connecting thread can be attached to almost any wall surface including insulated walls.
- Tensioning tool, wire, tensioners and wall fixings included with bracket kits.
- Supplied with thread and Allen key / hexagon socket for securing against the wall
Series 100/180
Perfectly engineered to enhance your urban scheme

The original support bracket – proved for over 20 years – for use on medium to large sized schemes. A timeless classic combining ease of installation and reassuring stability.

These brackets are manufactured from marine grade 316 stainless steel and boast a filigree effect which is enhanced by the highly polished finish.

Benefits of the Series 100 & 180

- Versatile brackets with supporting disks – for medium to large climbers.
- Greater lateral forces can be sustained and uneven wall surfaces accommodated due to the patented concave 5.0mm thick welded base plate design.
• Installation on insulated walls can be carried out effectively with the special support system.
• Ease of installation and alignment with hidden wall fixing.

• Simplicity of interim wire tensioning with grub screw end cap.
• Wire, tensioners and wall fixings included with the bracket kits.

A wide span allowing plants to be trained across a lateral planting space
Excellent stability provided by heavy-duty welding when preparing for heavier plant

Support bracket and joint sealing ring in situ on 16 cm thermal insulation – for complete facade coverage
Series 118
Perfectly engineered to enhance your urban scheme

Heavy duty twin anchored support bracket – for use with large woody climbers.

These brackets are manufactured from marine grade 316 stainless steel and boast a filigree effect which is enhanced by the highly polished finish.

Benefits of the Series 118

- Versatile brackets with supporting disks – for medium to large climbers.
- Greater lateral forces can be sustained and uneven wall surfaces accommodated due to the patented concave 5.0mm thick welded base plate design and double point anchoring.
- Integrated cable tracking means growing plants can entwine around the cable – subsequent secondary growth can displace the straight cable allowing for greater support.
- Slide mounting joining plate between brackets – for ease of installation.
When space is not available for tree planting – vertical vine planting systems provide perfect softening of urban structures

- Installation on insulated walls can be carried out effectively with the special support method.
- Ease of installation and alignment with hidden wall fixing.
- Simplicity of wire tensioning with grub screw end cap.
- M10 connecting thread can be attached to almost any wall surface including insulated walls.
- Wire, tensioners and wall fixings included with the bracket kits.
Series 120/124/134

Perfectly engineered to enhance your urban scheme

Range of heavy duty brackets which can accommodate a range of different width bars and longer vertical lengths.

These brackets are manufactured from marine grade 316 stainless steel and are enhanced by the brushed steel finish.

Benefits of the Series 120/124/134

- Wire spacing of 140mm is ideal for lighter plants such as Clematis.
- Installation on insulated walls can be carried out effectively with the special support system.
- Simplicity of wire tensioning with wire grip.
- All bar lengths compatible with all bracket sizes.
- M10 connecting thread can be attached to almost any wall surface including insulated walls.
- Wire, tensioners and wall fixings included with the bracket kits.
Series 134: large facades require this big spacer to keep the appearance in proportion.

Series 124: multiple cable guides suspended between two residential properties.

Series 120: for softening of warehouse cladding.

GreenBlue URBAN
Establishing the future urban landscape.
Series 245
Custom engineered to enhance your urban scheme.

Innovative flexible stainless steel cable mesh netting. Custom made to suit your application perfectly.

Netting system integrates seamlessly with all GreenBlue bracket ranges or sustainable frameworks to create living walls, web bracing, demarcation borders and safety barriers – to mention but a few applications.

Combination cable mesh net supported by series 124 spacers and support tubes providing a high degree of stability. Also features lateral framework cables.
## Fixings and accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Compatible Bracket Packages</th>
<th>Component Description</th>
<th>Unit Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBW20</td>
<td>Series 40</td>
<td>2.0mm diameter 7 x 7 strand stainless steel wire rope.</td>
<td>10 Lm</td>
</tr>
<tr>
<td>GBW40</td>
<td>Series 60, 90, 100, 180, 118, 120, 124 &amp; 134</td>
<td>4.0mm diameter 7 x 19 strand stainless steel wire rope.</td>
<td>10 Lm</td>
</tr>
<tr>
<td>GBB40</td>
<td>Series 40</td>
<td>4.0mm diameter stainless steel round bar.</td>
<td>1 or 2 Lm</td>
</tr>
<tr>
<td>GBB60</td>
<td>Series 60 &amp; 90</td>
<td>6.0mm diameter stainless steel round bar.</td>
<td>1 or 2 Lm</td>
</tr>
<tr>
<td>GBW55</td>
<td>Series 60, 90, 100, 180, 118, 120, 124 &amp; 134</td>
<td>Wire grip for 4.0mm diameter wire with stud for tensioning.</td>
<td>Each</td>
</tr>
<tr>
<td>GBWC40</td>
<td>Series 40, 60, 90, 100, 180, 118</td>
<td>Wire cross to hold 4.0mm wires/bars at 90°.</td>
<td>Each</td>
</tr>
<tr>
<td>GBWC60</td>
<td>Series 60 &amp; 90</td>
<td>Wire cross to hold 6.0mm wires/bars at 90°.</td>
<td>Each</td>
</tr>
<tr>
<td>GBD18</td>
<td>Series 100 &amp; 180</td>
<td>Disk to hold up to 8 wires at varied angles – use with GBMWG.</td>
<td>Each</td>
</tr>
<tr>
<td>GBMWG</td>
<td>Series 100 &amp; 180</td>
<td>Wire grip for 4.0mm wire – for use with GBD18.</td>
<td>Each</td>
</tr>
<tr>
<td>??</td>
<td>??????</td>
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<td>??</td>
</tr>
</tbody>
</table>
Climbing plant guide

It is advisable when designing a plant climbing system to choose the plant species as the first step – GreenBlue offer a range of brackets to support all plant types.

The following pages provide an assortment of climbing plants suitable for use with GreenBlue trellis systems. There are a range of aspects to consider when choosing a climbing plant – such as wall direction, wall size, coverage requirement, flowering species, appearance, evergreen or deciduous, maintenance levels and trunk type.

AKEBIA DECNE. – Lardizabalaceae
- Slow starting but vigorous.
- Hardy, semi-evergreen twining plant with attractive foliage and flowers.
- Thrives in well draining soil conditions in sun or shade.

CLEMATIS L. – Ranunculaceae
- A popular easy to establish flowering climber
- Thrives best in full sun, with roots in cool, moist, well draining soil.
- Can be pruned hard in spring time if required.
- General ongoing maintenance is critical.

HEDERA L. – Araliaceae
- Evergreen Ivy which can be used to cover large areas
- Thrives in almost any soil condition and location.
- May be severely trimmed back when the foliage becomes too dense.
- If unattended is capable of damaging certain wall constructions so specification and location analysis must be made carefully.
- Given careful maintenance, it is a colourful and reliable climber.

JASMINUM L. – Oleaceae
- The flowering, twining “Jasmines” are easily grown in most fertile soils, preferring sunny positions.
- A hardy species, capable of covering large walls and pergolas.
- Excellent for withstanding industrial sites.
- Not best suited to exposed cold locations.

LORNICERI L. – Caprifoliaceae
- Climbing “Honeysuckles” include lovely fragrant flowering climbing plants.
- They luxuriate in half or complete shade and are happy in almost all soils.
- It is a somewhat untidy specie and is best in a ‘scrambling’ environment such as arches or fence lines.

PASSIFLORA L. – Passifloraceae
- The “Passion Flowers” are best planted in sheltered, sunny, south/west facing walls.
- Boast beautiful, fascinating and exotic flowers leading to various fruits after long summers.
- Many species cannot withstand the climate in the British Isles.
- The flowers/stems may be damaged by first frosts – however they reappear in spring.

SOLANUM L. – Solanaceae
- Spectacular semi-evergreen climber for sheltered areas.
- Require full sun in south/west facing areas.
- Are not fastidious as to soil conditions.
- Tender to frost however new stems quickly grow back.
### TRACHELOSPERMUM LEMAIRE – Apocynaceae
- Beautiful evergreen, twining, self clinging plant.
- Can be grown in all but the coldest localities.
- Best on south/west facing walls.
- Bear sweetly scented flowers in July/August.

### VITIS L. – Vitaceae
- Vines usually grown for its fruit and ornamental values.
- Woody climbers which support themselves with twining tendrils.
- Small flowers and fruits are produced after hot, dry seasons.

### WISTERIA NUTT. (wistaria) – Leguminosae
- Vigorous, fast growing, deciduous twining climber – most spectacular climber when in full bloom.
- Multitude of long, superb draping flowers in May/June.
- Not suited to chalky soil.
- Can be trained by careful cultivation – may require annual hard pruning in late winter.
- Require a sheltered sunny location

<table>
<thead>
<tr>
<th>Description</th>
<th>Location</th>
<th>Soil</th>
<th>Height</th>
<th>Maintenance</th>
<th>Suitable Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akebia “Quinata” Vigorous, low maintenance climber with small red/purple blooms.</td>
<td>North East South West</td>
<td>Reasonable well draining soil.</td>
<td>9.0m to 12.0m</td>
<td>Remove dead or unwanted stems in May.</td>
<td>Series 90, 100, 180, 118, 120, 124, 134, 245</td>
</tr>
<tr>
<td>Clematis “Armandii” Strong growing climber with cream/white bloom in April/May. Subject to injury in harsh winters.</td>
<td>South West</td>
<td>Fertile soil needed and shade base with stones/shrub.</td>
<td>4.5m to 6.0m</td>
<td>Demanding climber, remove dead stems immediately.</td>
<td>Series 40, 60, 90, 100, 180, 118, 120, 124, 134, 246</td>
</tr>
<tr>
<td>Hedera “Colchica” Handsome, hardy, strong growing by with dark thick leathery leaves</td>
<td>North East South West</td>
<td>Will survive in most soil unless contaminated</td>
<td>8.0m to 12.0m</td>
<td>Keep from gutters and roofs - prune in spring and summer.</td>
<td>Series 90, 100, 180, 118, 120, 124, 134, 247</td>
</tr>
<tr>
<td>Jasminum “Stephanense” Easily grown, vigorous climber with fragrant flowers in June/July.</td>
<td>South West</td>
<td>Reasonable well draining soil.</td>
<td>6.0m to 8.0m</td>
<td>Remove dead or unwanted stems after flowering.</td>
<td>Series 90, 100, 180, 118, 120, 124, 134, 248</td>
</tr>
<tr>
<td>Lonicera “Brownii” Awesome flowering Honeysuckle in July-October – careful training as natively untidy.</td>
<td>East South West</td>
<td>Fertile soil needed and shade base with stones/shrub.</td>
<td>6.0m to 8.0m</td>
<td>Remove dead or unwanted stems after flowering.</td>
<td>Series 40, 60, 90, 100, 180, 118, 120, 124, 134, 249</td>
</tr>
<tr>
<td>Passiflora “Cæsarea” Vigorous climber with tangled stems. Flowers are truly exotic. Is affected by frosts.</td>
<td>South</td>
<td>Free draining soil.</td>
<td>6.0m to 8.0m</td>
<td>In April cut back unwanted and frost damaged growth.</td>
<td>Series 40, 60, 90, 100, 180, 118, 120, 124, 134, 250</td>
</tr>
<tr>
<td>Solanum “Crispum” Vigorous, hardy, semi-evergreen climber with small slightly fragrant flowers</td>
<td>South West</td>
<td>Luxuriant in chalky soil – will survive in reasonable soil.</td>
<td>4.5m to 6.0m</td>
<td>In April cut back unwanted and frost damaged growth.</td>
<td>Series 40, 60, 90, 100, 180, 118, 120, 124, 134, 251</td>
</tr>
<tr>
<td>Trachelospermum “Jasminoides” Self clinging climber with sweetly scented blooms - for sheltered areas.</td>
<td>South West</td>
<td>Well drained acid soil for best results.</td>
<td>7.0m to 8.0m</td>
<td>High maintenance. Remove damaged and weak stems in March.</td>
<td>Series 40, 60, 90, 100, 118, 120, 124, 134, 252</td>
</tr>
<tr>
<td>Vitis “Vinifera” Vigorous woody ornamental vine which provides grapes. The leaf offer superb autumnal colours.</td>
<td>East South West</td>
<td>Most free draining soils – the presence of chalk is beneficial.</td>
<td>8.0m to 10.0m</td>
<td>Cut back unwanted growth in summer.</td>
<td>Series 100, 180, 118, 120, 124, 134, 253</td>
</tr>
<tr>
<td>Wisteria “Floribunda” a lovely woody climber which can be trained. Provides dark green leaves and fragrant violet/blue flowers.</td>
<td>East South West</td>
<td>Reasonable well draining soil – dig in compost in installation</td>
<td>4.0m to 6.0m</td>
<td>Cut back years growth to 150mm in July.</td>
<td>Series 100, 180, 118, 120, 124, 134, 254</td>
</tr>
</tbody>
</table>
Note: All bracket kits include all relevant fittings, brackets and tensioners etc.

<table>
<thead>
<tr>
<th>Code</th>
<th>Bracket type</th>
<th>Stand off from wall</th>
<th>Distance between brackets (max)</th>
<th>Fixing type</th>
<th>Wall type for fixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB040R</td>
<td>Series 40</td>
<td>40mm</td>
<td>1.0m</td>
<td>Rawl</td>
<td>Wood, Concrete &amp; Masonary</td>
</tr>
<tr>
<td>GB060R</td>
<td>Series 60</td>
<td>60mm</td>
<td>2.5m</td>
<td>Rawl</td>
<td>Wood, Concrete &amp; Masonary</td>
</tr>
<tr>
<td>GB090R</td>
<td>Series 90</td>
<td>90mm</td>
<td>2.5m</td>
<td>Rawl</td>
<td>Wood &amp; Concrete</td>
</tr>
<tr>
<td>GB090C</td>
<td>Series 90</td>
<td>90mm</td>
<td>2.5m</td>
<td>Resin</td>
<td>Concrete</td>
</tr>
<tr>
<td>GB090M</td>
<td>Series 90</td>
<td>90mm</td>
<td>2.5m</td>
<td>Resin &amp; Sleeve</td>
<td>Masonary</td>
</tr>
<tr>
<td>GB090IC</td>
<td>Series 90</td>
<td>90mm</td>
<td>2.5m</td>
<td>Resin, Anchor Bolt, Sealing Ring</td>
<td>Thermal insulation to Concrete</td>
</tr>
<tr>
<td>GB090IM</td>
<td>Series 90</td>
<td>90mm</td>
<td>2.5m</td>
<td>Resin, Sleeve, Anchor Bolt, Sealing Ring</td>
<td>Thermal insulation to Masonary</td>
</tr>
<tr>
<td>GB100W</td>
<td>Series 100</td>
<td>100mm</td>
<td>3.0m</td>
<td>Screw</td>
<td>Wood</td>
</tr>
<tr>
<td>GB100C</td>
<td>Series 100</td>
<td>100mm</td>
<td>3.0m</td>
<td>Resin</td>
<td>Concrete</td>
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<tr>
<td>GB100M</td>
<td>Series 100</td>
<td>100mm</td>
<td>3.0m</td>
<td>Resin &amp; Sleeve</td>
<td>Masonary</td>
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<tr>
<td>GB100IC</td>
<td>Series 100</td>
<td>100mm</td>
<td>3.0m</td>
<td>Resin, Anchor Bolt, Insulated Spacer &amp; Sealing Ring</td>
<td>Thermal insulation to Concrete</td>
</tr>
<tr>
<td>GB100IM</td>
<td>Series 100</td>
<td>100mm</td>
<td>3.0m</td>
<td>Resin, Sleeve, Anchor Bolt, Insulated Spacer &amp; Sealing Ring</td>
<td>Thermal insulation to Masonary</td>
</tr>
<tr>
<td>GB118W</td>
<td>Series 118</td>
<td>180mm</td>
<td>3.0m</td>
<td>Screw</td>
<td>Wood</td>
</tr>
<tr>
<td>GB118C</td>
<td>Series 118</td>
<td>180mm</td>
<td>3.0m</td>
<td>Resin</td>
<td>Concrete</td>
</tr>
<tr>
<td>GB118M</td>
<td>Series 118</td>
<td>180mm</td>
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<td>GB118IM</td>
<td>Series 118</td>
<td>180mm</td>
<td>3.0m</td>
<td>Resin, Sleeve, Anchor Bolt, Insulated Spacer &amp; Sealing Ring</td>
<td>Thermal insulation to Masonary</td>
</tr>
</tbody>
</table>

Prefix letter | Fixing Type | Wall for Fixing |
--- | --- | --- |
W | Screw | Wood |
C | Resin | Concrete |
M | Resin & Sleeve | Masonary |
IC | Resin, Anchor Bolt, Insulated Spacer & Sealing Ring | Thermal Insulation to Concrete |
IM | Resin, Sleeve, Anchor Bolt, Insulated Spacer & Sealing Ring | Thermal Insulation to Masonary |
Wall greening packages & installation support

Complete Support through the whole design, specification, pricing and installation process.

The wall greening packages have been developed following long experience in the GreenBlue range of products; ensuring that compatible products are integrated to provide a range of solutions that are proven to be effective.

Benefits of the wall greening packages

- Peace of mind for architects
- Save time in product design
- Assurance that compatible products are combined
- Wealth of product experience incorporated
- Adaptable for all applications

The installation support service is offered free of charge for every first installation of GreenBlue products; this ensures that the products are installed correctly and efficiently – providing the best long term results and project completion efficiency.

Benefits of the installation support service

- Peace of mind for contractors and architects
- Increase efficiency of the installation through training of proven methods
- Free of charge service