# **Comparison Table**

Name:	Diamond Mesh 31gsm	X-Weave 70gsm	Crossweave Netting: White 70gsm	Crossweave Netting: 105gsm	6ply Heavy Duty Knotted Polyethylene	6ply Heavy Duty with Fire Retardant	9ply Heavy Duty Knotted Polyethylene	Stainless Steel Reinforced Netting	Large Mesh: 40mm Square Netting	Large Mesh: 50mm Square Netting	Large Mesh: 60mm & 75mm Square Netting	90GSM Insect Netting & Bags	103GSM Heavy Duty Fruit Fly Netting
GSM:(Grams per Sq Metre)	31gsm	70gsm	70gsm	105gsm	54gsm	54gsm	84gsm	115gsm	38gsm	17gsm	24gsm	90gsm	103gsm
UV Treated:	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	<b>Ø</b>	Ø	Ø
Mesh Size:	16mm x 16mm	17mm x 17mm	2-3mm	5mm x 5mm	19mm x 19mm	19mm x 19mm	19mm x 19mm	19mm x 19mm	40mm x 40mm	50mm x 50mm	60mm & 75mm	<1mm	Approx. 1mm
Colours:	Black & White	Black & White	White	Black, Red & Blue	Black	Black with Red Spec	Black, Stone & White	Black	Black	Black	Black	White	Translucent/ White
Construction:	Woven Diamond	Woven Diamond	Crossweave Pattern	Crossweave Pattern	Knotted Square	Knotted Square	Knotted Square	Knotted Square + Stainless Steel	Knotted Square	Knotted Square	Knotted Square	Knitted HDPE	Knitted HDPE
FR Option:				Ø		Ø							
AvailableBy- the-metre:							Ø	Ø					
Bulk Buy Discount:	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø



# **Bird Exclusion Netting**

Quatra (a division of Haverford brands Pty Ltd) stocks Australia's largest range of bird netting options. Our "Quatra Netting" branded products are of the highest quality and are a high strength, light weight option for protecting your assets.

When purchasing from us, you are dealing direct with the importer ensuring competitive pricing on our range of products. Our large premises ensures large scale orders can be filled in a timely manner, without the need to wait for specific overseas supply.

Together, our sales consultants have over 100 years combined experience importing, installing and selling bird nets throughout Australia.

All nets that we import into Australia are UV Stabilised and are designed to stand up to the harsh Australian conditions. Quatra Brand netting is the netting of choice for well over 50 installers, resellers and retailers across Australia and New Zealand.





### White Diamond Mesh Bird Netting

#### Specs:

- Manufacture: Knotless Polyethylene
- Mesh Size: 16mm x 16mm
- GSM (Grams per Sq Metre): 31
- UV Treated

#### Applications:

- Orchards (commercial and residential)
- Vineyards
- Vegetable Gardens
- · Backyard Fruit trees
- \*Not suitable for VICTORIAN household use

#### General comments:

One of our most popular options based on affordability and effectiveness. It is used in all rural scenarios from large vineyards through to residential backyards. The fact that most birds can clearly see the white colour (from a distance), ensures that is just as much a visual deterrent as a physical barrier. We stock a large range of sizes in this material, and can also import to your custom requirements. (subject to minimum qty's)



# Black Diamond Mesh Bird Netting

#### Specs:

- · Manufacture: Knotless Polyethylene
- Mesh Size: 16mm x 16mm
- GSM (Grams per Sq Metre): 31
- UV Treated

### Applications:

- Orchards (commercial and residential)
- Vineyards
- Vegetable Gardens
- · Backyard Fruit trees
- \*Not suitable for VICTORIAN household use

#### General comments:

Another popular rural option based on affordability and effectiveness. Users often select this material when they are looking to maintain the visual aesthetics of their property (as black is harder to see from a distance). It is also used in large vineyards/orchards through to backyard residential vegetable gardens. We stock a large range of sizes in this material, and can also import to your custom requirements. (subject to minimum qty's)





# X-Weave 70gsm Bird / Hail Net

#### Specs:

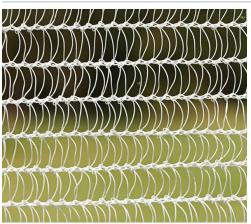
- Colour: Black & White
- Manufacture: 380D High Density Polyethylene Knotless
- Mesh Size: 17mm x 17mm (+ additional interior Cross Weaves)
- GSM (Grams per Sq Metre): 70
- UV Treated

#### **Applications:**

- Small Mesh Anti Bird Netting
- Heavy Duty Bird netting for Vineyards / Orchards
- Added Hail Protection due to the X-Weave pattern
- \*Not suitable for VICTORIAN household use

#### General comments:

A versatile and strong bird netting option, the X-Weave offers bird exclusion with many additional benefits. At 70 GSM, it is double the strength of your average hardware variety. The small x-weave pattern gives added protection against hail and smaller pests, whilst still allowing bees a passage of entry. It offers these advantages whilst still maintaining a low wind and shade rating.



# Crossweave Netting: White 70gsm

#### Specs:

- Manufacture: Polyethylene
- Mesh Size: 10mm Primary Lines with Additional Cross Weaves (approx size 2-3mm)
- GSM (Grams per Sq Metre): 70
- Other: 25% shade, UV treated & 40mm reinforced edging

#### Applications:

- Hail Netting
- Small Mesh Bird Netting
- Socially responsible wildlife choice of netting.

#### General comments:

A wildlife friendly option, this netting offers excellent protection against smaller pests AND hail damage. At 70GSM, it is a strong material, however keep in mind this construction will provide 25% shade coverage and an increased wind rating. It is most commonly used where hail and small pests are the primary concern, however keep in mind it results in a difficult passage for bees.



# **Crossweave Netting: 105gsm**

#### Specs:

- Manufacture: Polyethylene
- Mesh Size: 5mm x 5mm
- GSM (Grams per Sq Metre): 105
- UV treated
- Black, Red & Blue

#### Technical Data:

PROPERTIES | TEST RESULT (Warp/Weft)
TENSILE STRENGTH 615.7N/841.4N (ASTM D 5034-2009)
ELONGATION 126.1%/139.6% (ASTM D 5034-2009)
BURSTING STRENGTH 585.6N (ASTM D 3787-2015)
TEARING STRENGTH 338.2N/124.5N(ASTM D 4533-2015)

#### **Applications:**

- Small Mesh Anti Bird Netting
- · Hail Protection netting

Available with or without Fire Rating

#### **General comments:**

At 105GSM, it is one of the stronger materials available in a cross-weave pattern. It is most commonly used where hail and small pests are the primary concern. Available in Black OR Blue, it is a specialised netting tailored to very specific requirements. The crossweave pattern (as opposed to diamond), makes it very simple to work with.





# 6Ply Heavy Duty Knotted Polyethylene

#### Specs:

- Manufacture: 500denier / 6ply High Density Polyethylene
- Mesh Size: 19mm x 19mmTwine Thickness: 1.0mm
- GSM: 54 Grams Per Square Metre
- UV Treated
- Twine Breaking Strength: 15.3 KGF
- Knot Breaking Strength: 20.0 KGF

#### Applications:

- Warehouse / Factory Bird Control
- Commercial Bird Netting Application
- Building rooftop stone access prevention for birds
- Domestic Sheds and Verandah bird control netting
- Commercial Installation for Orchard Bird Protection
- General Purpose

#### General comments:

At 19mm square, this is a very popular option due to the hard wearing properties of the twisted/knotted design. The fact that it is square mesh design (ensuring simple installation), makes it the first choice for commercial buildings, as well as making it perfect for permanent structures over orchards and vegetable gardens. This net is a great choice when you have aggressive birds, are looking for a simple installation that looks great, and want something that will last the test of time.



### 6Ply Heavy Duty with Fire Retardant

#### Specs:

#### Fire Retardant Specifications:

- Colour: Black with Red Fleck
- Test Method: ISO 1805
- FR treatment: UL-94, V2 rating

#### **General Specifications:**

- · Colour: Black with Red Fleck
- Manufacture: 500denier / 6ply High Density **Polyethylene**

#### • Mesh Size: 19mm x 19mm

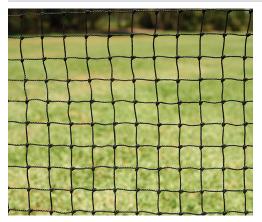
- Twine Thickness: 1.0mm
- GSM: 54 Grams Per Square Metre
- UV Treated

#### Applications:

- Warehouse / Factory Bird Control where FR netting is specified
- Commercial Bird Netting Application
- Building rooftop stone access prevention for birds
- Domestic Sheds and Verandah bird control netting
- Commercial Installation for Orchard Bird Protection
- Ideal for Sparrow sized birds & larger

#### General comments:

As mentioned above, the 6ply Heavy Duty Knotted is the first choice for Commercial Bird Netting installations in warehouses, awnings etc. With new regulations being implemented regarding fire safety, we now also carry this range of 19mm netting with an added flame retardant. It is easily identified by the red coloured fleck throughout.



# 9Ply Heavy Duty Knotted Polyethylene

#### Specs:

- Manufacture: 500denier / 9ply High Density Polyethylene
- Mesh Size: 19mm x 19mm
- Twine Thickness: 1.25m
- GSM: 84 Grams Per Square Metre
- UV Treated
- Twine Breaking Strength: 21.6 KGF
- Knot Breaking Strength: 25.0 KGF

#### Applications:

- · Warehouse / Factory Bird Control
- Commercial Bird Netting Application
- Building rooftop stone access prevention for birds
- Domestic Sheds and Verandah bird control netting
- Commercial Installation for Orchard Bird Protection
- General Purpose

#### General comments:

At 19mm square, this is a heaver duty version of the above 6ply. Boasting 9 strands, it is commonly used in scenarios where there are aggressive birds or "other" animals accessing the netting. The fact that it is square mesh design makes it perfect for permanent structures over orchards and vegetable gardens. This net is a great choice when you have aggressive birds, are looking for a simple installation that looks great, and want something that will last the test of time. It is also the most common netting used for Cat containment and exclusion.





# Stainless Steel Reinforced Netting

#### Specs:

- Manufacture: 500denier / 9ply High Density Polyethylene + 0.16mm Stainless Steel Wire Intertwined through mesh
- Mesh Size: 19mm x 19mm
- Twine Thickness: 1.3mm
- GSM: 115 Grams Per Square Metre
- UV Treated

#### **Applications:**

- High volume Warehouse / Factory Bird & Possum Control
- Heavy Commercial Bird Netting Application
- Building rooftop stone access prevention for birds
- Domestic Sheds and Verandah bird and possum control netting
- Commercial Installation for Orchard Bird Protection
- Aviary Netting

#### General comments:

A revolutionary advance in netting technology, our Stainless Steel Reinforced netting is an advanced blend of netting and stainless steel. Whilst still maintaining the many advantages of working with a netting product, the added S/Steel ensures added strength and durability. Perfectly at home in a rural or industrial setting, it is an extremely durable product where you want the best protection for your assets. Often specified into projects where Possums and "other" animals can be of concern.



# Large Mesh: 40mm Square Netting

#### Specs:

- Manufacture: 400denier / 12ply High Density Polyethylene
- Mesh Size: 40mm x 40mm
- Twine Thickness: 1.3mm
- GSM: 38 Grams Per Square Metre
- UV Treated
- Square Mesh Design

#### Applications:

- Pond and dam covering net
- Pond and Pool Cover netting
- Duck exclusion net
- Boat Cover Netting
- Warehouse / Factory Bird Control
- Commercial Bird Netting Application
- · Domestic Sheds and Verandah bird control
- General Purpose

#### General comments:

Our "larger" mesh netting is used when targeting larger bird species (such as pigeons and seagulls). The primary reason for using a larger mesh is to reduce the visibility of the netting, whilst having the added advantage of reducing the overall weight. It is most commonly used as a bird exclusion net in warehouses, on boats or as a Predator Bird barrier over dams/ponds.



# Large Mesh: 50mm Square Netting

#### Specs:

- Manufacture: 500Denier / 6ply High Density Polyethylene
- Twine Thickness: 1.0mm
- GSM: 17
- Mesh Size: 50mm x 50mm
- UV Treated

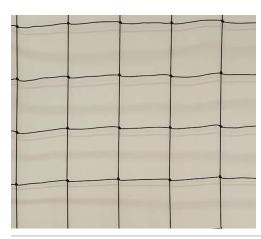
### Applications:

- Pond and dam covering net
- · Pond and Pool Cover netting
- Duck exclusion net
- Boat Cover Netting
- · Warehouse / Factory Bird Control
- · Commercial Bird Netting Application
- · Domestic Sheds and Verandah bird control
- General Purpose

#### General comments:

A similar concept to the above netting, this 50mm/6ply netting most commonly finds its home in commercial buildings/warehouse excluding pigeons and seagulls. It also has the advantage of being discreet and light weight, so can similarly be used over ponds OR pools to exclude ducks.





# Large Mesh: 60mm & 75mm Square Netting

#### Specs:

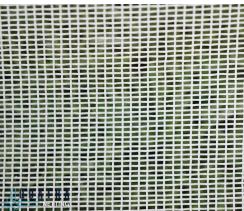
- Manufacture: 400Denier / 12ply High Density Polyethylene
- Twine Thickness: 1.3mm
- GSM: 24
- Mesh Size: 60mm x 60mm
- UV Treated

#### Applications:

- Pond and dam covering net
- Pond and Pool Cover netting
- Duck exclusion net
- Boat Cover Netting
- · Warehouse / Factory Bird Control
- Commercial Bird Netting Application
- Domestic Sheds and Verandah bird control
- General Purpose

#### General comments:

Our 60mm and 75mm varieties have been specifically developed as a pond/pool covering. They offer strength, are low-weight, are discreet, and don't allow the birds/ducks a footing to stand on (as opposed to making themselves comfortable on a small mesh bird netting). Good UV properties ensure it can be left outdoors permanently. This is the best choice for excluding predator birds from your dam, keeping ducks out of your pool, or keeping larger birds off your boat.



# 90GSM Insect Netting & Bags

#### Specs:

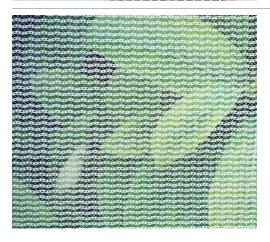
- HDPE Monofilament
- GSM (Grams per Sq Metre): 90
- UV Treated
- Colour: Milky White
- Shade Creation: 35%
- Mesh size: <1mm</li>

#### **Applications:**

- Commercial & Residential Fruit Fly netting
- Socially responsible wildlife choice of netting
- Snail and Slug Exclusion
- Crop Protection Netting
- Microclimate / Shade / Evaporation

#### General comments:

These nets provide protection from insect such as fruit fly, aphids, whitefly, carrot fly, cabbage root fly and caterpillars etc. and also allow adequate vital sunlight, air and water for plants to grow. Benefits observed included faster tree growth, delayed infection due to pests and up to an 80 % Reduction in pesticide use.



### 103GSM Heavy Duty Fruit Fly Netting

#### Specs:

- HDPE Monofilament
- GSM (Grams per Sq Metre): 103
- UV Treated
- Colour: Translucent (White)
- Shade Creation: 32%
- Mesh size: approx. 1mm

#### **Applications:**

- Commercial & Residential Fruit Fly netting
- Socially responsible wildlife choice of netting
- Snail and Slug Exclusion
- Crop Protection Netting
- Microclimate / Shade / Evaporation

#### General comments:

A heavy duty translucent netting designed for protection from most insects and Fruit Fly. The construction is involves a strong lengthwise row pattern, with additional thatched weaves in-between to reduce the effective hole size. The product also features a selvedge edge of 50mm for additional strength where attaching.





As detailed above, there is a large range of Bird Netting options available. Not all will work in all situations, so it is critical to find the netting type that will suit your specific application. Although the GSM (Grams per Square metre) can give an indication to the strength, it should not be the only decisive factor on if a particular net is correct for your space. It is important to consider the following factors among others:

- Durability (UV and Bird considerations)
- Ease of installation
- Mesh (hole size) to suit your targeted species
- Wind and Shade considerations of the material
- Available bundle sizes (to minimise joins)
- Price
- Wildlife safety considerations
- Hail / small pests
- Aesthetics of the installed netting

If you are still unsure which netting is best for your application, please do not hesitate to get in contact: website: www.quatranetting.com.au email us at: sales@quatranetting.com.au call our staff on: (02) 97715288.

# **Installation Instructions**

#### **BIRD NETTING INSTALLATION INSTRUCTIONS**

The following pages consist of 2 different installation instructions:

#### 1) Installation Instructions for SQUARE Mesh Bird Netting

- 6Ply Heavy Duty Knotted Polyethylene
- · 6ply Heavy Duty w/ Fire Retardant
- 9Ply Heavy Duty Knotted Polyethylene
- Stainless Steel Reinforced Netting
- Stainless Steel Wire-Core Braided Netting
- Large Mesh: 40mm Square Netting
- Large Mesh: 50mm Square Netting
- · Large Mesh: 60mm & 75mm Sq Netting
- Crossweave Netting: White 70gsm
- Crossweave Netting: 105gsm

#### 2) Installation Instructions for DIAMOND Mesh Bird Netting

- · White diamond Mesh Bird Netting
- Black Diamond Mesh Bird Netting
- X-Weave 62GSM Bird / Hail Net



The most common method of attachment is utilising perimeter wire cables, which act as an attachment point for your netting. This preparation in terms of wire guides, anchor points and tension is the cornerstone of a professional and effective finished project.

#### Step 1

To hold the wire in position (close to your perimeter surfaces), the first step is to install a series of Eyelets. These eyelets hold the wire close to the surface, and allow to also travel around corners and confirm to custom shapes.

- Our Multi Surface Eyelets are the most commonly used and versatile option, although we also supply a range of S-Hooks, Girder Clips and net spikes.
- Eyelets should be placed at minimum spacing of 500mm apart. Spacing greater than this amount will result in Net-Bowing between each bracket when the net is pulled tight (across to the opposing side)

For best results, we suggest a more substantial eyelet is used at the ends of runs and in corners. We would recommend our Pad Eye Plate OR a Netbolt Eyelet.

#### Step2

The next step is to feed the wire cable through the eyelets to create the perimeter and intermediate support.

- Wire cable available in 1.8mm, 2mm, 2.4mm and 3mm (Gal and S/S options)
- Maximum length of any individual run of wire approx. 20m In the instance where there is no over-head attachment points, intermediate support cables should also be installed.
- The wire rope is required to be tensioned to be effective. This is achieved by the use of a Turnbuckle. Once again Gal and S/S options are available.
- For terminating the wire at each end of an individual run, we recommend the "crimping" method. Crimps (otherwise known as swages or ferrules) are a quick, economical, neat and effective option that can be secured using our Crimping Pliers. The wire passes though the crimp, travels around the adjacent Eyelet and then returns back into the crimp for termination. These are available in Copper or Aluminium





Guide wire fed through eyelets to create a wire framework for attachment to netting.



Multi Surface Eyelet/ Bracket



Turnbuckle



Aluminium crimps



Copper & Aluminium crimps



#### **Installing the Netting**

Once you have a taught and secure wire framework in position, you can commence the process of attaching your netting. Your main objective in terms of installing your netting should always be:

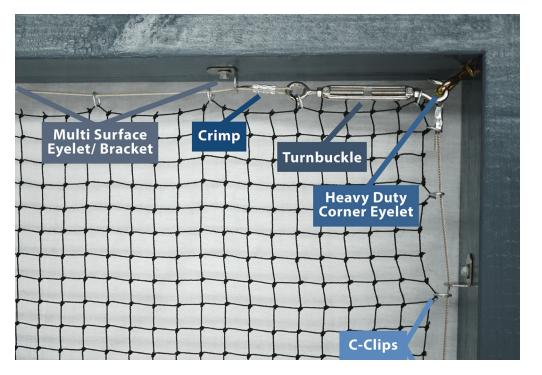
Install the netting as taught as practical, with sag and creases kept to a minimum where possible.

No Gaps: Birds will give your netting installation a thorough inspection and look for any point of access at joins and around the perimeter... so beat them to the point and ensure all spaces are enclosed securely.

#### Joins:

A major advantage of our Quatra Bird Netting range, is the large number of bundle size options. With bundles up to  $100 \,\mathrm{m} \times 20 \,\mathrm{m}$ , we recommend opting for bundles that will require the least amount of joins. Joins are time consuming, create a visible line, and create a potential weak point in your installation. When unavoidable however, you have a few options to create a secure join:

- Option 1: Overlap the two nets that you wish to join by approximately 30cm. You can then use C-Clips / Hog Ring Staple to attach the two nets together securely.
- Option 2: Overlap the two nets that you wish to join by approximately 30cm, and then weave a rope/cord alternatively in and out of the two nets to create a rope join. A C-Clip>Hog Ring staple can be placed around the rope intermittently to stop the rope slipping in either direction. This process is more time consuming, however it does provide a very secure and neat finish with very minimal bowing effect.



#### Attachment:

The recommended attachment method is to use our C-Clips / Hog Ring method. There are 2 levels of installation device that can be used (based on your experience, budget and install frequency for professionals).

- Manual load and operated C-Clip System Suitable for smaller and 1 off jobs
- Cartridge Loaded C-Clip System
  Load a large quantity into the chamber and then install your rings at a much faster rate.
  This tool has a higher initial outlay in terms of cost, however results in significant time savings for medium, large and ongoing work using this method

Our standard ring supply is in Galvanised Steel. If you have a requirement for Stainless Steel please contact our staff.

Based on a need for efficiency, in commercial applications the netting is simply attached directly to the perimeter and support wires. In smaller, more critical or more precise installs, the netting can be edged using 5mm Black Rope prior to attachment. This process involves weaving a rope through the perimeter of the netting (creating a rope seam), which in turn provides a more substantial point of attachment. The clip is then placed over the rope and netting together, and joined to the cable.











C Clips

5mm Black Rope

Ring Fastener Gun

Ring Fastener Gun



#### **Securing and Cutting around Obstructions**

Often in the real world, obstructions including pipes and bulkheads will dictate the need for odd shape installations. No two installs are the same, so when negotiating an obstacle you may choose to use it to your advantage (as an attachment point itself using cord or cable ties). More commonly however, this is when the flexibility of the "Wire-Rope" cabling system is pronounced, as the wire can navigate around the obstacles.

The most common method of cutting your netting around "narrow" pipes and obstacles is to use the "slitting method". As opposed to measuring precisely the dimensions of the obstacle and pre-cutting exactly, it is recommended to simply cut a slit in the netting, and then slide the netting on both sides of the obstacle and then pull the netting tight to fasten.

#### Cut with excess

When cutting your netting to fit specific areas, it is always recommended to cut with allowable excess, and then simply trim to fit whilst attaching. This is much preferred to coming up slightly short and having to create a small join.

#### Zippers

Access to commercial lighting and other utilities is a common aspect of a netting installation project. Our range of Zippers provide the most economical and effective method of creating a reusable access point.

We offer a range of Zipper products including:

- Bulk 100m Reels / Sliders
- Premade (closed end) Zippers in varied lengths
- Large L-Shaped premade Zipper Panels
- Quick to install "Easy-Fit" Zipper panels



# **Installation Instructions for DIAMOND Mesh Bird Netting only**

CAUTION: DO NOT PRECUT YOUR NET TO SIZE BEFORE INSTALLING. DO NOT CUT YOUR NET UNTIL IT HAS BEEN INSTALLED AND YOU ARE COMPLETELY SATISFIED IT HAS **COVERED THE REQUIRED AREA.** 

Being diamond mesh design, the diamonds can be stretched lengthwise and widthwise. This design dictates the fact that the net MUST be pulled out to the required WIDTH once taken out of the packaging. For example if you have purchased a 50m X 20m net, when taken out of the packaging you must pull the net out widthwise to 20m BEFORE you attach the net along the length. If you attach the net along the length of one entire side, the net WILL NOT stretch across the full 20m. An example is below, illustrating a 50m X 20m property and net.

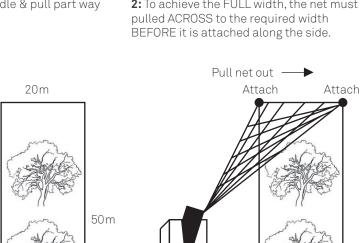


1: Locate end of net bundle & pull part way out of packaging

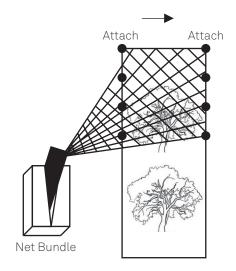
2: To achieve the FULL width, the net must be

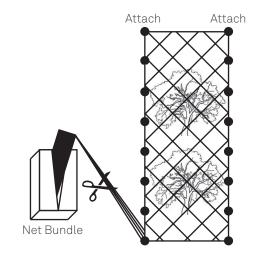
3: Work your way along the length a metre or two at a time, continuing to pull across to required width.

4: Continue to the end using this method, and you will achieve the required coverage.



Net Bundle







Net Bundle

CAUTION: DO NOT PRECUT YOUR NET TO SIZE BEFORE INSTALLING. DO NOT CUT YOUR NET UNTIL IT HAS BEEN INSTALLED AND YOU ARE COMPLETELY SATISFIED IT HAS COVERED THE REQUIRED AREA.





1: Once you have located the end of the net bundle, DO NOT simply pull out the length you require and cut. **2:** DO NOT start by attaching one entire side of the LENGTH. If you do this you will not be able to later pull the net across to the full width. Although you may think that this will be an easier and quicker method, we can assure you that the intended coverage will not be as intended.

**3:** This example shows one side being attached at a time. You can see from the illustration that the net CANNOT be pulled far enough across to the other side.



