PRODUCTS/ USE/ INSTALLATION/ COSTS

V. BIRD NET

- **Bird Net 2000:**
  - Bird Net 2000 is the most efficient and effective method for total exclusion.
  - It is manufactured from “super strong” knotted polyethylene twine.
  - Flame-Resistant.
  - Available in Black, Stone and White.
    - **Note:** Black Color Net should be used in direct sunlight situations.

- **Species:** All Birds. (See Bird Type)

- **Bird Pressure:** Light to Heavy.

- **Bird Type:**
  - 2” Net: Pigeons and Larger Birds.
  - 1-1/8” Net: Starlings, Pigeons.
  - 3/8” Net: Sparrows and smaller birds.

- **Application:** For roofs and open areas such as warehouses, loading docks, airline hangars and other exposed enclosures.

- **Positives:**
  - 100% Exclusion of Pest Birds.
  - Long Term Bird Control.
  - 10 Year Guarantee (black net, 3 yrs for stone & white).

- **Negatives:**
  - Experience is required (Rarely a simple installation).
  - Netting Structures is Labor Intensive.
  - Since cost of netting structures is usually significant, there may be “sticker shock” to the customer.

- **Common Mistakes:**
  - Taking on a netting job that you have not properly been trained to do!
    - Call for help!
    - Sub-Contract the Job.
  - Under bidding the job!
    - Know your costs and mark-up accordingly!
      - Material
      - Lift Rental
      - Labor
      - Cleaning- prep
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OPENING YOUR BIRD NET

- **Identification:**
  - Most bird net comes in a bundle, which resembles a big pillow.
  - Upon opening the bundle, you will notice an identification tag from Bird-B-Gone.
  - This tag tells you:
    - Mesh Size
    - Color
    - Net Size.

- **Identifying the Corner:**
  - It is important that upon opening up your net that you locate the most important CORNER.
  - All corners are marked with a piece of colored yarn or string.

- **Stretching the Net:**
  - The net will not appear to be “square”… **but it is!**
  - Simply grab the corners (with help from a partner) and stretch the net into its original square/rectangular shape.
  - If you have questions at this stage… **Call 1-800-392-6915!** – WE WILL HELP!
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- **Installation Time:** It varies!

- **Installation Overview:**
  - It is important that you use the correct hardware for the surface into which you are securing your bird net.
    - Bird Net attached to a wood frame will take different hardware than Bird Net that is attaching to concrete or steel.
  - The most critical part to every netting job is securely attaching the tensioned cable to the affected structure.
    - Once the cable is secured, attach the netting to the cable frame with “hog rings”.

- **Installation Instructions:**
  - **Corner & Intermediate Attachments.**
    - **Corner attachments** are under the most pressure and must be the strongest part of the system...or the system will fail.
      - Corner attachments are used where the cable begins/ ends and where the cable turns corners.
      - **Example:** If you must net off a square or rectangular building, corner attachments would be placed/ secured in all four corners.
    - Examples of Corner Attachments Include:
      - **Wood:** Galvanized or Stainless Screw Eyes.
      - **Concrete:** Expanding Net Bolts.
      - **Steel:** Eye Bolts & Nut (This it the only item that needs to be drilled into the steel). Hilti Attachments.

  - **Intermediate attachments** also hold the cable to the structure.
    - Intermediate attachments must hold the cable TIGHT against the wall/ structure.
    - Properly spaced and secured, intermediate attachments will prevent the net from bowing and/ or giving the birds room to enter/ exit the area of coverage.

  - **Installation of Intermediate attachments should be every 18 inches.**
    - Otherwise, the birds may have the room to enter/ exit the area of coverage.
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- **Examples of intermediate attachments include:**
  - **Wood/ Concrete:** Anchor Rivets & Split Pins, Net Spikes, Multi-Purpose Cable Brackets. These provide low visibility as well as strength.
  - **Steel:** Girder Clips & cable brackets with Hilti pins.

- **For Long Runs (Over 30’),** it is advisable to use an M-6 Eye Bolt every 20’ to 30’ as an intermediate attachment for strength. You can also use these eye bolts to secure a support cable.

- **Straining Wire/ Cable**
  Once you have installed the corner and intermediate attachments, it is time to run your straining wire.
  - Straining wire (or cable) is available in galvanized or stainless steel.
    - Stainless Steel cable (AND HARDWARE) is primarily used in areas that are near the ocean (i.e. salt air).
    - Most installations only require galvanized wire and hardware.
  - There are two (2) different sizes of cable/ wire:
    - 1/16” for most jobs.
    - 3/32” for bigger jobs which require long runs (in excess of 70’)

- **Ferrules**
  Ferrules are used at the first corner attachment, and then later at the turnbuckle.
  - Run **two (2)** aluminum or copper ferrules through the end of the cable.
    - Use aluminum ferrules for galvanized wire and copper ferrules for stainless steel.
  - Loop the cable through the first corner attachment and back through the ferrules.
  - Secure/ crimp the ferrules to lock cable into place with a ratchet crimper.
    - Use crimp tool to fully crush the ferrules around the cable.
    - This will create a strong loop.
Run cable through all intermediate attachments and finally through the turnbuckle at the end of the cable run.
- Secure/ crimp the ferrules to lock cable into place after looping through the turnbuckle.

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- **Turnbuckles**
  - Turnbuckles are used to tighten your straining wire.
  - Use one turnbuckle for each “length” of cable.
  - *For Example:* If you are netting a square, there are 4 sides (or lengths) of cable. Use one (1) turnbuckle for each side (or a total of 4 turnbuckles for this example).

Turnbuckles are available in galvanized or stainless steel (in M6-Medium or M8-Large).
- Turnbuckles must be well anchored since they are exerting a great deal of tension on the cable/straining wire.
- Medium turnbuckles (M6) are designed for cable runs up to 75 feet.
- Large turnbuckles are designed for cable runs 75 feet and above.
- **Make sure that turnbuckles are “fully open” prior to installing.**

- **Hog Ringing the Net to the Cable**
  The netting is secured with “hog rings” to the cable frame using a HOG RING TOOL. This tool loops a small metal ring (the hog ring) around the netting and cable. Each Hog Ring Manual Tool holds 50 Hog Rings. Hog Rings are packaged 2,500/Box. The tool is easy to use and usage instructions are enclosed with every tool. We also have pneumatic hog ring tools available to speed up installation.

  - *For 2” and 1-1/8” Net:* A hog ring should be attached for every square of netting to secure the net to the cable.
  - Failing to hog ring every square could allow enough room for birds to enter/exit the area of coverage.
  - *For ¾” Net:* A hog ring can be used every other square to secure the net to the cable.

- **Start Attaching the Bird Net in One Corner.**
  - Starting several rows of mesh in, attach the netting to the cable with hog rings, starting in one corner and proceeding along a straight line (*stay on the same mesh row!*).
  - Proceed about four (4) feet and stop.
  - Then going back to the same corner, start attaching the net along the perpendicular side (the other direction) for four feet.
Complete hog-ringing the “long side” of the net all the way to the next corner.

Complete hog-ringing the short side of the net all the way to the next corner.

At this point, one long side and one short side of the net should be hog ringed to the cable.
  • Proceed by hog-ringing the opposite “long side” to the cable.
  • Remember to stretch it tight and to **stay on the same mesh row** while hog-ringing.
    ➢ If you do not stay on the same row, the net will appear “wavy” and crooked when installed.

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- **Start Attaching the Bird Net (continued).**
  - Complete the job by attaching the final short side to the cable.
  - Trim off excess netting with scissors, leaving an extra 2” overlap of netting (this prevents persistent birds from trying to enter behind the cable).
  - Inspect all attachments as to strength.
  - Look for mistakes…and correct as necessary.

- **Zippers**
  Once the net has been installed, there may be a need to access lighting, plumbing fixtures, safety equipment, etc. Installing a zipper offers easy “open & close” access for these purposes. Zippers come in three standard lengths – 1 ft.; 3 ft. & 6 ft. Longer zippers (custom sizes) are available upon request.
  - Choose the area for access (directly below lights, etc.).
  - Keep the zipper closed!
  - Hog ring the cloth part of the zipper through the material and around the strand of net.
    • Use one hog ring every square of net on both sides.
  - Assure that the zipper is in place and secure.
  - Open (un-zip) the zipper and cut the middle strands of net.
    • This creates a “hole”.
    • Now you have access!
    • Simply zip-up to close the area.

- **Support Cables:**
  A support cable is simply additional sections of cable placed at various intervals to help strengthen the overall net structure.
  - They should support horizontal nets over 40’ in length.
    • *For example:* A support cable would be attached at 20’.
  - **CALL US** if you need advice on support cables: **1-800-392-6915.**