

THE POST & WIRE SYSTEM

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This document is intended for use as an introduction to post & wire as well as an installation and parts reference guide for those people wanting to specify or purchase post & wire for their problem structure.

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1.0 BIRD SPECIES & BIRD PRESSURE:

Pigeons & Gulls – Light to medium pressure (surface mount system – light pressure only). Can also be used against Corvids (Crows, Ravens, Jackdaws, Rooks and Magpies)

2.0 WHERE TO USE:

Ledges, parapets, signs, beams, parapet copings, pipes, hand rails, gutters & roof ridges etc.

3.0 INTRODUCTION:

The post & wire system is a cost effective and extremely versatile and totally humane bird deterrent system, which has been used for many years to keep pigeons and gulls off buildings. It can be adapted to fit almost any building or architectural feature.

The basic concept is to place thin stainless steel wires, tensioned with springs, just above the ledge or other feature used by the birds. The wires present a physical barrier to the birds' normal landing behaviour and even if they do find a way to land, the unstable feel of the spring-loaded wires will deter all but the most persistent birds.

The wires are held in position usually by vertically mounted stainless steel posts, but many other fittings have been developed to enable the system to be used in many different situations. The components used for the pigeons and gulls differ in that larger and more robust components are required for gulls.

Post & wire offers a discreet, economical solution to areas of light pressure infestation, or as a preventative measure to future potential infestations. In medium pressure infestation the system needs to be installed by an experienced person with great care to achieve the intended results. This guide will help you specify the correct components for the particular infestation you are wanting to combat.

3.1 When to use:

Post & wire is an ideal solution for ornate building façades where the anti-perch system's visual impact is an important factor to be taken into consideration. It is also a very economical method to use on deep ledges and sills where anti-perch spikes may be too costly.

3.2 Strengths:

Post & wire is an all stainless steel construction making it highly durable in the elements.

Post & wire is a discreet low visual impact solution that is ideal for use on high profile buildings and structures where effectiveness versus appearance is a factor that must be carefully considered.

Post and wire, once installed can be quickly refurbished after building decorations or alterations without having to remove the entire system. Wires springs and

crimps can be demounted prior to works commencing and re-instated or replaced at minimal expense to the owner after works are complete.

3.3 Weaknesses:

Post & wire systems are not appropriate for combating high pressure bird infestations where birds are roosting over night or nesting. Post & wire can be a complex and technical system to install when tackling intricate features on a building. Appropriate skills are required. If you are not experienced and require training we can supply you with training video that will explain the basic principals and rules of how to plan and execute a post & wire installation.

Post and wire, whilst cost effective per linear meter of protection in terms of materials versus Anti-Perch Spikes or Bird Coil, can be a time consuming exercise to install due to the amount of drilling or bonding required, making it slower to install than some of our other ledge products.

Post & Wire is highly susceptible to damage by persons needing access to the protected areas such as window cleaners, painters & decorators and maintenance personnel.

There are a wide variety of fixings available to cope with the many different situations and substrates that you are likely to encounter during installation

3.4 Basic Measurements:

Whichever substrate you are fixing to the following measurements MUST be adhered to prevent the determined pest birds from overwhelming the system:

	PIGEONS	SEAGULLS
Height of front / leading edge wire	90mm	160mm
Post size to be used on leading edge.	110mm X 4mm dia. single head for low-pressure. 130mm X 4mm dia. double head for medium pressure.	180mm X 4mm dia. single head.
Height of wire in subsequent rows	130mm	160mm
Post size to be used on subsequent rows.	150mm X 4mm dia. single head.	180mm X 4mm single head.
Distance between posts	Max 1.5m apart, can be less, but use a min of one spring per 1.5m run.	Max 3m apart, can be closer, but use a min of one spring per 3m run.
Distance between parallel rows of wire	65mm max	125mm max
Spring type	Standard Spring	Micro Spring
Wire type	0.45mm dia. Plastic coated to 0.70mm dia., breaking load 24.5 kg	0.96mm dia. non-coated, breaking load 93kg.
Crimp type	Nickle plated crimps	1mm copper crimps
Crimp tool	Post & wire tool	Ratchet crimp tool

4.0 INSTALLATION INSTRUCTIONS – FOR PIGEONS ON MASONRY SUBSTRATES

4.1 Basic tools required:

- Tape measure
- Marker Pen
- Hammer drill
- 6.5mm masonry drill bit
- 6.0mm masonry drill bit
- Soft hand brush
- Small hammer
- Post & Wire Crimp Tool (see shop listing)

4.2 The basic concept:

Holes are drilled into the substrate being protected i.e. a ledge or sill. Special anchor rivets are inserted into the holes. Vertical bird posts are then tapped home into the rivets which hold the bird posts tightly in position. Standard springs are then hooked on to each post and nylon coated pigeon wire is then looped around the eye in one post and crimped into place using the post & wire crimp tool. The open end of the wire is then run along to the next post in line where it is looped through the standard spring and pulled tight until the spring is just opening and loading its tension onto the wire. The wire is then crimped at the spring end and the tail of the wire is trimmed using the cutting tool incorporated in the post & wire crimp tool.

All runs of wire must be counter-tensioned at each end to prevent the end posts gradually leaning inwards under the tension of the springs. This is normally achieved by running an unsprung length of wire down from the eye in the outer most posts at a 45° angle down to a screw pin & plug fixing. Where you have a vertical wall at the end of a run of wire, i.e. a window reveal then the force of the spring loading can simply be counter tensioned by finishing the wire on a screw pin & plug fixing at the same height as the run of wire.

Where multiple rows are required, 125mm posts are used for the 2nd row onwards and 90mm posts or 130mm double-headed posts are used on the leading edge wire to prevent the pigeons from forcing their way under the post & wire system from the outside edge.

4.3 Marking out:

Mark out where you want every post and screw pin to be fixed using the tabular guide for distances provided on page 2. The front row of posts must be set a minimum distance of 20mm away from the leading edge of the ledge or sill to prevent damage to the substrate when drilling and hammering. The holes for the second row should be set only 35mm back from the first row see step * Subsequent rows may then be placed 65mm apart. Ensure that the posts in parallel rows are staggered to prevent them lining up. This will stop the pigeons from landing on, and straddling the posts and/or springs. If this is allowed to happen they can then close their wings and drop down between the wires.

4.4 Drilling:

Using a 6.5mm masonry drill bit for the pigeon post rivet holes and a 6.0mm diameter drill bit for the screw pin & plug fixings; drill all of your previously marked-out holes to a depth of 25mm.

Take great care not to drill too near the edges or to cause other damage from the hammer action. A good quality SDS hammer drill is recommended.

4.5 Rivet insertion:

Brush away the dust created from the drilling and tap-into-place the anchor rivets. Different colours are available to suit different substrates. Tap the anchor rivets gently with a hammer to ensure they are driven completely home. The domed shape of the anchor rivets help prevent water ingress but our silicone spike adhesive can be placed in the hole to help prevent this further.

Tap in the red wall plugs for the horizontal and/or vertical screw pins to be used as counter tension anchors.

4.6 Post and pin insertion:

Knock the pigeon posts into their anchor rivets using care not to split the masonry. Normally the posts are tapped-in to a depth of 20mm so on the leading edge use 110mm posts or 130mm double-headed posts (with two wires for added protection on medium pressure infestations). 150mm posts are then used for the subsequent rows.

Wind the screw pins into their red wall plugs until only the flat head with the eyelet is protruding.

4.7 Springs:

Before starting the wiring first you will need to hook a spring on to each of the eyelets found in the flat heads of the posts. On each spring one end loop is slightly open and the other is fully closed. The open loop is the one that you use to hook it onto the post's eyelet. Each post eyelet should have only one spring. Do not run the wires any further than 1.5meters without stopping and re-starting the wire using a spring and crimps.

4.8 Wiring

Once all your posts, springs & pins are in place, start to wire the system from the inner-most run outwards to prevent you damaging the system by reaching over installed wires.

Cut a length of wire about 100mm longer than required to stretch between the posts to allow for a tail to work with. Feed a crimp onto the wire and then thread the wire through the eye of the post keeping the crimp close to the post. Then double back the wire through the crimp to create a loop. Slide the crimp up tight to the post leaving a short 50mm tail on one side and the main length of wire on the other side.

Using the crimp tool, crimp the wire to hold it in place. Note that the crimp tool has specially profiled jaws to prevent damage to the wire or the crimp and yet to optimise the clamping effect of the crimp.

4.9 Finishing the wire:

Run the bird wire along to the next post having previously hooked a standard spring through this post. Next, load another crimp onto this end of the wire. Then thread the wire through the loop in the free end of the spring. Next double the wire back through the crimp. Finally slide the crimp up close to the spring and pull all of the slack out of the wire until the spring just starts to open, keeping the wire tight. Crimp the wire using the post & wire crimp tool leaving the wire held firmly in place. Trim off the excess pigeon wire using the post & wire crimp tool's cutter.

4.10 Bending the outer posts:

The row of posts along the leading edge should not be bent outwards so that the tips of the posts and hence the wire itself, over hangs the leading edge of the ledge or sill being protected. This is why the second row of posts is set only 65mm behind the first row. Once bent outwards there should be a gap of 65mm between the front wire and the second wire.

The reason for this is to ensure that the pigeon encounters the wire first before being able to touch the ledge or sill with its feet as it attempts to land. Thus preventing it getting a foothold.

This is the basic system but there are many different permutations available to help with the many different circumstances you may encounter. See our current product catalogue of details or call 0845 602 0806 for more information.

5.0 INSTALLATION INSTRUCTIONS – FOR PIGEONS FOR SURFACE MOUNTING

5.1 Basic tools required:

- Tape measure
- Marker pen
- Silicone adhesive (see shop listing)
- Frame gun (see shop listing)
- Stanley knife
- Surface activator (see shop listing)
- Small posi-drive screw driver
- Post & wire crimp tool (see shop listing)
- Disposable paper towel

5.2 The Basic Concept

This system is only suitable for light pressure areas.

On timber, metal flashing, Upvc, glass, structural steelwork, conduits or other areas where you cannot drill you must use our surface-mount components which allow you to adhere stick-on bases to the substrate to act as an anchor for the pigeon posts and screw pin anchors. Shorter posts are used compared to masonry installations, which are mounted in the surface mount bases. The surface-mount bases come in a variety of colours to suit the colour of the substrate being adhered to.

The system uses the same pigeon wire, crimps and springs as the masonry system.

The secret of a successful surface mount installation lies in your meticulous surface preparation prior to bonding the surface mount bases.

Not all surfaces will be suitable for bonding to. One should avoid the following:

- Old copper or lead surfaces which have a high level of oxidation and can delaminate if not carefully prepared.
- Marble and other polished stones can be difficult to bond to without the use of a surface activator.
- Sandstone and other highly porous soft stones, especially if they are heavily weathered or "gritty".
- Painted surfaces that are in a poor or flaky condition and also powder coatings that are starting to bubble, these can delaminate under tension.
- Corroded metal surfaces, old slates, flaking brickwork and other unstable surfaces which show signs of damage or weathering.

The principals of measurement are the same for surface mount as they are for masonry in terms of the required distances between posts and parallel runs of wire.

5.3 Surface Preparation

Porous surfaces being adhered to need to be sealed using the silicone adhesive that you are ultimately going to bond with, or another compatible surface primer, prior to installation.

New lead is coated with oil, which must be removed over the gluing area prior to installation. Old copper and lead must be thoroughly scrubbed down to shiny metal to remove surface patination. Also key the surface with aluminium oxide paper to provide a better bond.

Ensure all surfaces are clean, dry and grease free. Use our Soudal surface cleaner to remove grease and oil deposits from non-porous surfaces such as UpvC and metal.

The underside of the surface mount bases need to be treated with Surface Activator prior to installation. The Surface Activator helps to prepare the plastic surface. Wipe the underside of the bases with the paper towel or clean cloth and leave to dry for 5 minutes then install straight away. **DO NOT TOUCH THE UNDERSIDE OF THE BASES ONCE TREATED** as this will contaminate them.

The adhesion of the bases to non porous surfaces can be improved if the surface is also treated with Surface Activator. Use carefully and only on the immediate area being bonded to as the Surface Activator chemically etches the surface.

5.4 Installation

Apply the adhesive to the underside of the surface mount base. A ball of adhesive approximately 20mm in diameter should be sufficient. Then press the bases into place allowing small rivets of glue to form through the two holes in the base. **DO NOT WIPE THESE RIVETS AWAY** they act as nails once cured. Ensure that the head of the locking screws in the base are facing in a direction where it will be easy to get to with a screwdriver when you are installing the posts.

Where counter tension anchor points are required at each end of a run of wire, place a base as above to take a screw pin.

Allow the bases to cure normally 24-hours, less in warm weather. The system should not be installed in wet weathers or in temperatures less than 5°centigrade.

Once the silicone adhesive has fully cured insert the posts into the bases and tighten the locking screws built-in to the bases to hold the post in position, ensuring that the flat head is orientated in the correct place to take the springs and wires. Then wind-in the screw pins to the anchor bases at each end of a run.

90mm, single head posts are used on the leading edge run of wire and 125mm single head posts are used on the 2nd and subsequent runs of wire.

Installation from this point onwards is the same as it is for the masonry installation from Step 5. onwards.

6.0 INSTALLATION OF PIGEON WIRE SPECIALIST BRACKETS

There are many variations of brackets and supports for our Pigeon Wire to deal with the many different situations that can be encountered.

6.1 Gutter Clamps

These are manufactured in stainless steel and have a 21mm jaw for fixing over the outside edge of gutters. A polypropylene spacer (20mm X 20mm X 3mm) is supplied with each clamp. This is placed between the bolt and the surface being clamped to in order to prevent the bolt from causing damage to the surface finish. When installed the system looks neater if the bolt is installed inward facing. The bolt is 25mm M6.

6.2 Beam Clamps

These are similar in design and installation to the Gutter Clamps described above and are used for preventing pigeons from using the flanges of structural steelwork as perches. The clamp bolt is situated underneath the post rather than on the side.

6.3 Railing Clamps

This system can be used against both gulls and pigeons.

These two part stainless steel clamps are used for keeping pigeons off tubular steelwork such as balcony hand rails, KEE-KLAMP tubing etc. The system comes

in two parts, a worm drive clamp and a clamp post with a special base that allows the post to be anchored beneath the post before tightening. The two part system allows the screw head to be positioned anywhere as required for practicality and aesthetics.

This system is far superior to other "fixed" systems available on the market. Multiple posts can be used with one clamp for protecting wider railings.

The clamps are available in five diameters ranging from 25mm to 160mm.

There are two sizes of post available one for pigeons and one for gulls.

A 7mm nut spinner is also available for easy tightening of the clamp's worm drive.

6.4 Roof Ridge Brackets

This system can be used against both gulls and pigeons.

There are two designs of bracket available one for triangular ridge tiles and one for half-round ridge tiles. Each design is available in either 90mm posts for pigeons or 200mm posts for gulls.

The brackets should be counter tensioned at each end of a run using our screw pins and plugs.

Pigeon ridge brackets should be spaced at a maximum distance apart of 1.5-meters and gull ridge brackets should be spaced at a maximum distance apart of 3-meters.

We advocate bonding these brackets to the ridge tiles using our silicone adhesive. Old ridge tiles should be thoroughly cleaned using a wire brush to remove all loose material, lichen and moss. The ridge tiles should then be primed using our silicone adhesive and a disposable brush.

The underside of the brackets should first be treated with surface Activator to remove any oil or grease and to etch them ready for bonding. Leave to dry for 5 minutes and then bond to the ridge.

Alternatively the ridge brackets can be screwed into place using red wall plugs and timber screws through the pre-drilled holes.

For added stability the half-round ridge bracket is supplied with clamps, which, if required can fix into pre-cut notches in the mortar bed that the ridge tiles sit on.

7.0 INSTALLATION OF THE GULL WIRE SYSTEM

The same basic principal applies as it does for pigeons except that the components are heavier duty. The posts are longer to account for the gulls longer legs, the wire, springs and crimps are all heavier duty than for the pigeon wire system.

180mm X 4mm posts are used for masonry installations. 150mm X 4mm posts are used for surface mount installations. There is no requirement for a lower

leading edge wire as there is for pigeons. All rows are the same height but the distance between the rows can be extended to 125mm. The posts can be spaced further apart, up to 3 meters.

Micro springs, copper 1mm ferrules and 0.96mm uncoated wire is used in Gull Wire installations.

The post & wire crimp tool will still cut the wire but a ratchet crimp tool is advisable for compressing the copper crimps. (See listing under tools)

It is important with gull proofing that the birds should not be able to land nearby and walk up to the system. Gulls are very strong and if they choose to they can rip up a system that is in their way. The key to success with Gull wire is to prevent them landing at all by covering the entire ledge. "Edge protection" alone is not likely to achieve the desired results.