



NATAL RAZOR & WIRE

INSTALLATION MANUAL

TEL: 031 705 1875

FAX: 031 705 1852

EMAIL: natalrazor@mweb.co.za

133 Shepstone road

New Germany

3620

INSTALLATION OF A WELDMESH/RAZOR MESH FENCE

The process of installation of weldmesh fencing is relatively straight forward but can turn out to be a disaster if it is done by unskilled labour. The key elements affecting the installation and pricing of the weldmesh fence installation are firstly, the type of poles to be used and secondly the condition of the ground where the fence is to be installed.

1. TOOLS REQUIRED:

- Protective clothing
- Gloves
- Measuring tape
- Spades
- Iron rods
- wheelbarrow
- builders line
- spirit-level
- wire cutters
- saw or bush cutter
- Power drill
- Jack hammer (if installing on thick concrete)
- Generator (if no power is available)
- Extension cord
- Reinforcing rods to mark out a straight line
- Mixing board for concrete
- wire strainer
- Knowledge and skill

2. MATERIALS REQUIRED:

- Sand and stone for concrete (or readyblend)
- Cement
- Corner posts (wood, steel or concrete)
- Intermediate posts
- Stay or bracing posts
- Epoxy (in the case of concrete posts)
- Bolts (in the case of steel posts)
- Nails (in the case of wooden posts)
- Binding wire
- Straining wire
- U-nails
- Weldmesh from Natal Razor and Wire (of course)

Installation Process:

Step 1: Excavation and clearing

- Set out the fence line by marking out the corner posts
- Clear the area where the fence is to run to a width of 1m
- Measure the distance between the corner posts and mark out the holes for the intermediate posts (either 4m or 3m spacing between posts)
- Insert the iron rods or reinforcing rods at the corner posts in order to mark out a straight line by binding the builder's line on the corner posts in order to get a straight line for post excavation.
- Excavate the posts after you have marked out the holes on the straight line.

Step 2: Concreting of posts

- Pour the sand and stone onto the mixing board and mix it with the cement according to the required ratios.

Guideline for concrete:

15Mpa= 4 bags (40kg) sand 4 bags (40kg) stone and one bag of cement (50kg)

20Mpa 2 bags (40kg) sand and 2 bags (40kg) stone and one bag cement (50kg)

- Plant the corner posts first so as to save time as it will allow you to pull the straining wire the next day.
- Ensure that you use the level and the builder's line to make sure that the post is plumb (straight) and is in-line with the fence line.
- When installing treated posts (wooden) use a saw to cut the stays so that they fit neatly onto the major posts and ensure that the nails don't go through the other side of the post.

Guidelines for wooden posts:

- 4- inch nails for 75/100mm major posts
- 5-inch nails for 100/125mm major posts

Guidelines for steel posts:

- 150mm bolts for 100mm major posts
- 120mm bolts for 76mm major posts

Guidelines for concrete poles:

- epoxy

Step 3: Straining of wire

- Wire is to be wrapped around one corner post and pulled and wrapped around the other corner post leaving an extra 300mm for tensioning.
- The wire cutter (knippex plier) can be inserted in between the two wires with the handle inserted between the two wires
- gradually turn the knippex pliers in such a way that it causes the wire to pull towards the pliers and therefore tension the wire. This method is called the Spanish hitch and a diagram is available at the Natal Razor and Wire.
- The process is to be repeated on the other end with the wires pulled tightly so that the wires do not slacken while the wires are being strained.
- This straining process is repeated for each wire.
- Once all wires are strained they are to be tied to the intermediate posts.

Step 4: Tying of the weldmesh

- The weldmesh is to be rolled out in full in front of the posts (on the outside of the fence)
- The weldmesh is to be lifted up and tied to the first corner post.
- If no wire strainer is available the weldmesh is to be secured to an iron rod and pulled tightly (manual wire strainer) to the next intermediate post and then tied on to the post with binding wire.
- The process is to be repeated for every post until you reach the last corner post.
- Once the weldmesh has been secured onto the posts use the binding wire to secure the mesh tightly onto the straining wires.

Step 5: Maintain the area around the fence

- Ensure that grass and vines do not grow uncontrollably on the fence as it will cause the fence to rust quicker and fall over due to the weight of the grass and vines.
- Ensure that there are no fires close to the fence as this will compromise the integrity of the galvanizing.

INSTALLATION OF A BONNOX FENCE

The process of installation of bonnox fencing is much simpler than a weldmesh fence. The reason why it is much simpler is that the bonnox fence is manufactured in such a way that it does not require any straining wire. The bonnox fence also sometimes requires a straining box as opposed to a post with stays.

1. TOOLS REQUIRED:

- Protective clothing
- Gloves
- Measuring tape
- Spades
- Iron rods
- wheelbarrow
- builders line
- spirit-level
- wire cutters
- saw or bush cutter
- Power drill
- Jack hammer (if installing on thick concrete)
- Generator (if no power is available)
- Extension cord
- Reinforcing rods to mark out a straight line
- Mixing board for concrete
- wire strainer
- Knowledge and skill

2. MATERIALS REQUIRED:

- Sand and stone for concrete (or readyblend)
- Cement
- Corner posts (wood)
- Intermediate posts
- Stay or bracing posts
- Nails (in the case of wooden posts)
- Binding wire
- Straining wire
- U-nails
- Bonnox from Natal Razor and Wire (of course)

Installation Process:

Step 1: Excavation and clearing

- Set out the fence line by marking out the corner posts or straining box.
- Clear the area where the fence is to run to a width of 1m
- Measure the distance between the corner posts and mark out the holes for the intermediate posts (either 4m or 3m spacing between posts)
- Insert the iron rods or reinforcing rods at the corner posts in order to mark out a straight line by binding the builder's line on the corner posts in order to get a straight line for post excavation.
- Excavate the posts after you have marked out the holes on the straight line.

Step 2: Concreting of posts

- Pour the sand and stone onto the mixing board and mix it with the cement according to the required ratios.

Guideline for concrete:

15Mpa= 4 bags (40kg) sand 4 bags (40kg) stone and one bag of cement (50kg)

20Mpa 2 bags (40kg) sand and 2 bags (40kg) stone and one bag cement (50kg)

- Plant the corner posts first so as to save time as it will allow you to pull the straining wire the next day.
- Ensure that you use the level and the builder's line to make sure that the post is plumb (straight) and is in-line with the fence line.
- When installing treated posts (wooden) use a saw to cut the stays so that they fit neatly onto the major posts and ensure that the nails don't go through the other side of the post.

Guidelines for wooden posts:

- 4- inch nails for 75/100mm major posts
- 5-inch nails for 100/125mm major posts

Guidelines for the construction of a straining box:

- Use two posts that will be concreted into and one post of a length of 1,8m 75/100mm diameter that will be used as a bracing post between the two posts of a diameter of 75/100mm or greater
- Drill holes on the top of the two posts to be concreted and into the ends of the 1,8m horizontal bracing post.
- Using 4mm galvanised straining wire bind the vertical posts to the horizontal post so that it has a neat "H" shape.

-Concrete the posts once they are bound together.

Step 3: Tying of the Bonnox

-The bonnox is to be rolled out in full in front of the posts (on the outside of the fence)

-The bonnox is to be lifted up and tied to the first corner post.

-If no wire strainer is available the bonnox is to be secured to an iron rod and pulled tightly (manual wire strainer) to the next intermediate post and then wire staples must be used to secure the bonnox to the treated posts.

-The process is to be repeated for every post until you reach the last corner post.

-Once the bonnox has been secured onto the posts wire nails have to be used to secure the bonnox to the intermediate posts.

Step 4: Maintain the area around the fence

-Ensure that grass and vines do not grow uncontrollably on the fence as it will cause the fence to rust quicker and fall over due to the weight of the grass and vines.

-Ensure that there are no fires close to the fence as this will compromise the integrity of the galvanizing.



INSTALLATION OF RAZOR WIRE

The process of installation of razor wire onto an existing fence is one of the most popular and easiest installations to perform. The factors affecting the installation of the fencing is: 1. Whether the razor wire is going on to an existing fence. 2. Whether it will require brackets and straining wire.

1. TOOLS REQUIRED:

- Protective clothing
- Gloves
- Measuring tape
- spirit-level
- wire cutters
- saw or bush cutter
- Power drill
- Generator (if no power is available)
- Extension cord
- Knowledge and skill

2. MATERIALS REQUIRED:

- Tek screws (for steel poles)
- Coach screws (for concrete poles)
- Brackets
- Nails (in the case of wooden posts)
- Binding wire
- Straining wire
- Flatwrap or concertina razor wire from Natal Razor and Wire (of course)

Installation Process:

Step 1: Drilling for brackets

- Mark out placing for brackets and drill for the brackets at 1,5m spacing if going onto steel or concrete
- If going onto wood the brackets must be nailed onto the top of the treated posts
- Clear the area where the fence is to run by removing all branches and vines that may be in the way

Step 2: Straining of wire

- Insert the straining wire onto the holes in the brackets and strain using the Spanish hitch method explained in the section of weldmesh fencing. (Diagram available at the Natal Razor and Wire premises)

Step 3: Tying of the razor wire

- Tie the razor wire with the binding wire at regular intervals.
- Ensure that the razor wire is pulled out at the recommended length.

Guidelines:

- 15m for flatwrap razor wire
- 10m for razor coil

Step 4: Maintain the area around the fence

- Ensure that grass and vines do not grow uncontrollably on the fence as it will cause the fence to rust quicker and fall over due to the weight of the grass and vines.
- Ensure that there are no fires close to the fence as this will compromise the integrity of the galvanizing.



**ALL ELSE FAILS CALL OUR OFFICES AT 031 705 1875 FOR
ADDITIONAL ASSISTANCE AND SUPPORT.**