



ARAMAX

General Installation Procedure

NOTE: This procedure provides an overview of some the main steps involved to install an Aramax roof.

Each roof is different and careful consideration should be given to the project specific work method before commencing work on site.

Fielders personnel are available to assist where required in this process.

This document does not replace a SWMS or risk assessment for the process. It is intended as a guide to assist in the installation of this specialised product.



Section 1 – Responsibility of Fielders personnel

1. Prepare for job

<p>At least 2 weeks prior to arrival at a site to roll Aramax a site inspection will be performed by Fielders personnel. This will include but not be limited to:</p> <ul style="list-style-type: none"> • Entry / exit to site with trucks • Location for machine and space requirements • Safety of operators whilst onsite, toilets, induction, etc. • Discussions about crane location and requirements • Coil loading facilities and storage location <p>Coil is ordered for the job. Note, most Aramax coil has at least an 8 week lead time for delivery.</p> <p>Documentation is then collated and prepared as required for the job. This could include a SWMS statement, maintenance records, insurance details, etc.</p> <p>Transport is arranged for the machine, accessories and coil to site. Specific times for their arrival will be communicated to the installer prior to arrival.</p> <p>2 Fielders operators are booked to be on site, these may need to fly from interstate to perform this job. Travel and accommodation for the operators is arranged.</p> <p>A project manager will typically accompany the machine and operators for the start of the job.</p>	
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2. Set up machine and prepare for rolling

<p>Upon arrival at site the Fielders operators will set up the Aramax machine. This process requires a franna crane or Manitou supplied by the installer to unload and install the accessories for the machine.</p> <p>The Aramax itself arrives on a semi trailer and has hydraulic legs which lift the machine clear of the truck trailer which is then driven out from under the machine. It then lowers itself onto the ground into position to run.</p> <p>From arrival on site to set up ready to run typically takes 3-4 hours.</p> <p>Coil will arrive on a separate truck from the supplier and be unloaded on site by the franna or Manitou.</p>	
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3. Load Coil

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A franna crane or Manitou is use to place the uncoiler mandrel into the coil and it is lifted onto the mandrel. The operators will then cut the corners from the start of the sheet and feed this into the mill.

The material is fed all the way through the machine and about 2-3 metres is cut from the leading edge. This is the outer wrap of the coil which typically has damage.

4. Program job, run 1st sheet, QA checks

The installer is required to supply the sheet details including punching requirements to the operators. This is programmed into the machine control system ready for running.

Once the 1st sheet has been run QA checks are performed on the sheet checking components such as:

- Length of sheet
- Position of holes
- Corrugation depth and spacing
- Aramax bottom profile spacing

5. Roll Sheet

Material handling stands are placed into position in front of the roll former where each rolled sheet exits the machine. The stands are placed approximately 10m apart.

When the sheet is being produced it is fed over the stands by the installer personnel.

Only Fielders trained operators are to operate the Aramax machine.

When the end of the coil is reached (typically a coil has between 400-500m on it), the tail, which isn't long enough for another sheet is cut into 3-4m pieces as scrap. This scrap is the responsibility of the installer to dispose of.

6. Pack up machine and leave site

Once the job has been completed the operators will pack up the machine utilising the franna crane or Manitou. The accessories and machine are loaded back onto a truck to head to the next job.



Section 2 – Responsibility of Aramax installer

1. Provide sheet details to Fielders operators

The installer is required to supply and sign off on the sheet length and punching details for the job to be run.

It is recommended to use a steel tape and clamp it on the first cleat at the point on the tape showing the overhang. The tape is then stretched along the other cleats and measurements taken at each hole position.

Fielders supply a form for the installer to record and sign off on the measurements for the sheets.

During production measurements can be changed slightly to alter the hole positions. This could be to accommodate for steelwork that isn't aligned accurately. The Aramax operators will typically only roll 1 sheet in advance of the sheet being installed so that these changes can be made.

2. Assist to run machine, mark & prepare Sheet

When the machine is running 2 people are required to feed the sheet over the run out trolleys

A 3rd person marks the location of roofing screws as the sheet exits the machine onto the stands using the supplied marking ruler and a black permanent marking pen. These marks are used during installation to line up the stitching tek screws across the roof.

Some installers drill a 4mm hole at every mark to assist in locating and driving in the stitching tek screws when the sheet is installed on the roof.

Brackets for underslung roof should be attached to the sheet at this time. This can be done whilst the sheet is running out of the machine although this will require additional personnel on the ground.

Once the sheet is lifted (see next sections) the next sheet will start to be rolled.

Safety Precautions

- Aramax sheet edges are sharp, wear gloves when handling the sheet
- Ensure there are enough personnel available on the ground to assist in running the sheets

3. Lift sheet onto roof – overslung roof

<p>Soft slings are wrapped under the sheet and connected to the lifting equipment ready for lifting.</p> <p>Fielders recommend:</p> <ul style="list-style-type: none"> • Sheets less than 25m long 2 slings are used • Sheets 25m – 40m long 3 slings are used • Sheets greater than 40m a spreader bar is used with slings at least every 6m <p>Slings are wrapped around the Aramax sheet in a choke arrangement unless using a spreader bar where a basket lift is used.</p> <p>To stop outer slings sliding towards the centre of the Aramax sheet a hook over the end of the sheet and a rope back to the sling is used. Tag lines are added to assist in manoeuvring the sheet into position</p> <p>The sheet is lifted onto the roof and lowered into the cleats. A small podgy bar is used to align the sheet punched holes with the cleat holes. Bolts are put through the holes and tightened only by hand to allow some movement whilst stitching occurs.</p> <p>To complete the alignment and bolt installation 1 installer is required on the roof at each cleat point (wearing a harness) and one installer under the roof on an EWP.</p> <p>Safety Precautions</p> <ul style="list-style-type: none"> • Any personnel working from height should be wearing a harness connected to an appropriately installed safety line. • Aramax sheet edges are sharp, wear gloves when handling the sheet • All lifting gear should be inspected prior to use by a competent person • Lifting operations are to be performed by qualified operators. 	
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4. Lift sheets up to roof – underslung roof

<p>With the brackets in place for attaching to the roof, the sheet is lifted by winches on each beam up to the underside of the roof.</p> <p>Specifics for this process are worked out on a project by project basis. Depending on roof design, winch design and length of sheet. Fielders can assist with information on how to perform this installation method</p>	
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Safety Precautions

- Any personnel working from height should be wearing a harness connected to an appropriately installed safety line.
- Aramax sheet edges are sharp, wear gloves when handling the sheet
- All lifting gear should be inspected prior to use by a competent person
- Lifting operations are to be performed by qualified operators.

5. Producing sheets to stack on the ground for installation later

If storage of the Aramax sheets is required for installation later Fielders can supply designs for timber stacking frames. These allow the sheets to be stacked and restrained until they are required to be installed.

A method of lifting the sheet from the run out trolleys into the storage racks is required whilst running. This is typically a crane with lifting equipment as specified in item 3.

6. Clamp & stitching the sheets together

Working from one end of the sheet to the other, the installer pulls the overlap of one sheet over the top of the underlap of the sheet beside it and places a clamp (C-clamp locking pliers) on the two. Clamps are placed about every metre apart. The installer continues along the sheet placing clamps. A second person progresses along behind the first installing screws every 500mm where the marks are. The clamps are then removed and passed to the clamping person. A minimum of 6 clamps is typically required for a roof.

Several teams can work on stitching at the same time, although each should work from a cleat and in the same direction. This process is more difficult if teams try to work from cleats towards each other to meet in the middle.

Some assistance may be required from below the roof to push sheets up and into position so the overlap sits on top of the underlap. This is due to the length of sheets and bending under the weight of the sheet.

NOTE: It is important that all metal filings are removed from the roof at the end of each day with a blower to prevent rust marks.



Safety Precautions

- Personnel should not stand in a sheet that has an unrestrained edge, the sheet can be very unstable. Stand a sheet back from the unrestrained one or next to the cleats

7. Tighten bolts

Once all stitching has been completed the bolts through the sheet and cleat can be tightened. This is performed with a rattle gun from above or below. The other side of the bolt will need to be held.

The bolts should be tightened as per the Aramax standard fixing details drawing (drawing number AFS12004).

8. Attach Edge Restraint

Once all roof sheets have been installed, angle type edge restraints (as per drawing AFS12009) are installed at 500 centres to support the edge of the outer sheets.

Clamp the 20 SHS tube the underside of the outer edge of the last sheet as per the drawing.

Fix one end of the edge restraint to the inner sheet lap/crest, removing and reinstalling the existing screw as required. Then fix the other end of the angle through the outer edge of the sheet and into the tube under.

It is best to work in pairs (one fixing and one holding) to ensure that the outer sheet edge is installed straight and the edge restraints are installed square to the sheet edge.

9. Personnel requirements

The installer is required to supply 2 people to work with the Fielders Aramax team on the ground. One person will help to guide the sheets over the trolleys as it is produced, the second will mark the 500mm intervals on the sheet for the stitching screw locations.

It is recommended for efficiency that at each cleat location there is a person on the roof and a person below the roof in an EWP during installation. Additionally there should be 2 installers on the roof to assist with the stitching of sheets.



For example to install a roof with 50m Aramax sheets with 4 cleat locations the installers team should be at least 12 strong.

An additional floating person (supervisor maybe) is beneficial to prepare screws and bolts and deliver to the installers and assist the crane crew in slinging the sheets.