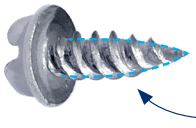
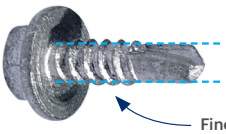
Needle Point vs Self-Drilling Screws

Which is best for installing Gutter Mesh?

Screw Type	Needle Point	Self-Drilling
		
Description	Also known as sheet metal stitching screws. A common misconception is that Needle Point scews are for timber. This is not correct. The point, shank, and thread profile are specifically designed for piercing and stitching together thin gauge sheet steel.	Self-drilling screws (also known as Tek screws) are defined by the drilling tip, which is used to self-drill a hole into the metal material upon insertion of the screw. This can make them easier to insert.
Application Metal Thickness Roof Sheeting = 0.42 - 0.48mm Guttering ≅ 0.48mm	General fixing through light weight steel, stitching light gauge sheet steel and fixing unsupported overlaps of roof sheeting to a total thickness of 1.0mm Metal sheet thickness of 0.42mm Min – 1.00mm Max (single or multiple sheets of the same thickness) Suits typical metal roof sheets and can be used for guttering	General fixing into steel. Common metal to metal applications include fencing, signs and trailers. Metal sheet thickness of 0.75mm Min – 2.50mm Max (single or multiple sheets of the same thickness) Not suited to typical metal roof sheets and guttering
Ease of insertion	⊖ **Higher force required to start insertion** The needle point can require more force in order to first pierce the steel sheet. Once pierced, the screw thread bites in and minimal force is required for the remainder of insertion.	⊕ **Easier to insert** The self-drilling tip cuts its own hole so it can be easier to get the screw tip through the roof sheet with less force.
Holding Strength	⊕ **Higher screw tension** Needle points pierce the roof sheet then form a thread as the hole stretches and forms around the screw thread. This means the thread of the screw engages with a more substantial amount of metal. Basically, there is a lot more metal around the screw for it to grip into which ensures that the gutter mesh and components are securely held to the roof. This higher screw torque results in higher holding strength.	⊖ **Lower screw tension** The self-drilling tips create a hole in the steel only marginally smaller than the outside of the thread. When the screw goes through the roof sheet, there is minimal thread engagement with it. This can create a "loose fit" and lower screw tension for securing gutter mesh and components, and there is a risk that the screws may loosen over time. This lower screw torque results in lower holding strength.
Thread Stripping	⊕ **Lower risk** Due to the higher screw tension and the coarser thread profile, there is less risk of stripping the hole in the roof sheet as a higher torque can be reached before the thread pulls through the hole in the sheet.	⊖ **Higher risk** Due to the lower screw tension and the fine thread profile, there is a far greater risk of stripping the hole in the roof sheet during installation if over-tightened. This results in a very loose screw with minimal ability to secure the mesh and components. Stripping the hole with self-drilling screws is easy to do and can be difficult to tell if it has happened, particularly in thin gauge metal like roof sheets.
Sealing Capacity	⊕ **Watertight seal** With a tight fitting formed hole around the screw and the thread gripping into more metal, a more reliable seal is created between the screw and steel sheet.	⊖ **High chances of leaking** With minimal thread engagement in the roof sheet and potentially stripped holes, there is a much higher risk of water leaking. As the self-drilling screws bore a hole which is larger than the shaft of the screw, the fit is not as tight creating a gap for water to enter.
Steel Swarf	⊕ **Minimal** The hole in the steel is *formed* by the screw, *not cut*, so there is minimal steel swarf that comes off the hole.	⊖ **Creates steel filings and swarf** The drilling tip creates a lot more steel filings and swarf. If left on the roof or gutters these can lead to roof rust and staining. Roof sheet manufacturers state quite clearly that any steel filings and swarf must be cleaned thoroughly from all roof and gutter surfaces.
Maintenance	⊕ **Maintenance friendly** If required, needle point screws can be carefully removed and reinserted successfully if any gutter maintenance is needed.	⊖ **Not maintenance friendly** Self drilling screws are not suited to removal and reinsertion. If maintenance or replacement of mesh components is required down the track, larger screws need to be put back in place.

Blue Mountain Co Gutter Mesh Recommendation

Screw Types For Gutter Mesh Installation

Roof

Blue Mountain Co only recommends the use of **needle point screws** for installing gutter mesh to the roof sheet. This is due to the needle point screws holding the gutter mesh more securely to the roof, having a watertight seal, creating minimal metal swarf during installation and being maintenance friendly.

Gutter Edge

Blue Mountain Co recommends **needle point screws** for the gutter edge but are also comfortable if **self-drilling screws** are used with the appropriate amount of care to ensure that the gutter mesh and trims are well-secured and the holes are not stripped during installation.

Blue Mountain Co Gutter Mesh Screws

Our proprietary screws have been specifically designed to suit installing gutter mesh.

- **Needle point** design
- **Rubber washer** to enhance the watertight seal, protect the roof surface during installation and helps prevent over tightening and stripping the screw
- **12mm shaft** length to prevent the screw piercing through the underside of the gutter edge (bead)