Composite Cross Arms

Composite Engineering's light weight composite cross arms are the ideal solution to the ongoing issues of maintenance and renewal of cross-arms manufactured from traditional materials such as hardwoods and steel. Supplied as pre-drilled, numbered and completed parts (including our pre-fitted crush tubes and end caps), the cross-arms are fast becoming the accepted alternative to traditional materials, Australia wide.

The light weight cross-arms reduce the injury potential, whilst saving money in shipping and handling costs.

Engineered for Extended Service Life

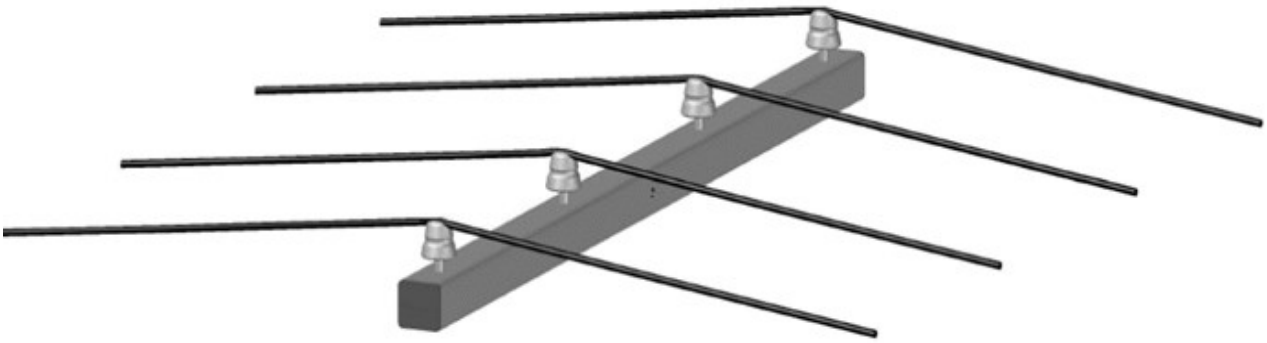
The engineered cross-arms have been designed to withstand the effects of UV exposure. Extensive UV and moisture testing confirm that no decrease in compression strength occurs, when tested to ASTM G154 standards. Composite Engineering cross-arms have been designed and developed specifically to cope with the harsh Australian environment.

Benefits of Composite Cross Arms

Composite cross-arms in service

- Light weight, when compared with hardwood and steel
- Superior impact resistance and toughness
- Environmentally friendly, with no dangerous preservatives or pesticides
- Impervious to moisture and insect attack
- Self-extinguishing, fire retardant resin matrix
- Will never rot, rust or corrode
- Superior dielectric strength
- Manufactured from UV stabilized materials
- Extended service life

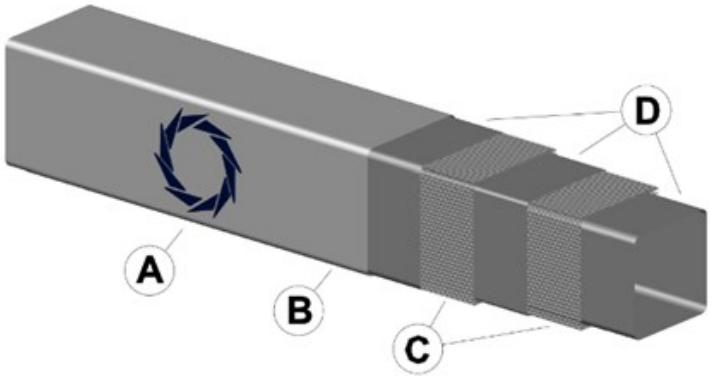
Composite Cross Arms



Composite Engineering have been working closely with an Australian coatings manufacturer to develop a coating system to suit the unique requirements of the cross-arms. The coating is specifically designed to provide a tough, long-lasting exterior finish that has excellent electrical insulation and tracking resistance properties. It also exhibits superior abrasion and impact resistance, whilst resisting stress fracturing, UV exposure, salt spray, and other airborne pollutants.

Simulated accelerated weather testing confirms no peeling, cracking, or coating adhesion issues were observed during the test cycles.

Complex Interior Architecture



A. Resin Matrix - Specifically formulated and dispersed throughout the entire profile approximately 35% by weight), the resin matrix also includes various additives such as UV stabilisers, Fire Retardant compounds, colour pigments and mould release agents.

B. Surface Veil - Giving the finished profile it's smooth and resin-rich finish, the surface veil also acts as an additional physical UV barrier. This outer layer on the pultruded section also protects the glass reinforcements from fibre blooming.

C. Fibreglass Rovings - All cross-arms in our range are manufactured from E-Glass electrical grade reinforcements, particularly in the form of direct rovings. All E-Glass reinforcements employed on the manufacture of the profiles meet a minimum tensile strength of 2000MPa, as per ASTM D2343 requirements.

D. Stitched / Combination Fibreglass Mats - Along with the glass fibre rovings, the cross-arm profiles feature continuous filament mats in the form of unidirectional, biaxial and multi-axial mats, as well as stitched combination mats. It is the unique lamination schedule of the profile that gives the Fibre Smart Solutions cross-arms their superior strength.

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