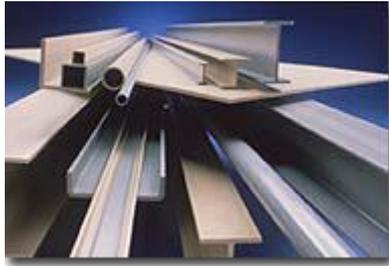


# RE-STRUCT GRP Profiles vs. Structural Timber



## PULTRUSIONS vs. STRUCTURAL TIMBER

Pultruded GRP structural profiles have a number of significant advantages over timber in many structural applications. They will not rot or decay and are not susceptible to insect attack. Unlike wood, GRP profiles require no environmentally unfriendly preservatives, they do not absorb any significant amount of water and are consistent in strength and appearance. Pultruded fibreglass is stronger, more rigid and lighter weight than structural timber.

COMPARE!	<b>RE-STRUCT Pultruded Fibreglass Structural Shapes</b>	<b>Structural Timber Douglas Fir</b>
CORROSION RESISTANCE	Superior resistance to a broad range of chemicals. Unaffected by moisture or immersion in water if ends are properly sealed. Surfacing veil and UV additives create excellent weather- durability.	Can warp, rot and decay from exposure to moisture, water and chemicals. Coatings or preservatives required to increase corrosion or rot resistance can create hazardous waste and/or high maintenance.
INSECT RESISTANCE	Unaffected by insects.	Susceptible to insect attack. Coatings to increase resistance to insects can be environmentally hazardous.
STRENGTH	Pultruded fibreglass is stronger, and has higher flexural strength than timber. Ultimate flexural strength (Fu) LW = 30,000 psi, CW = 10,000 psi. Compression strength is 30,000 psi.	Extreme fibre bending = up to 2800 psi.* Compression parallel to grain = up to 1800 psi.*
STIFFNESS	Pultruded fibreglass is approximately 1-1/2 times as rigid as wood. Modulus of elasticity LW = 2.5 x 10 <sup>6</sup> psi, CW = .8 x 10 <sup>6</sup> psi.	Modulus of elasticity = up to 1.8 x 10 <sup>6</sup> psi.*
WEIGHT	Specific gravity = 1.7. Pultruded fibreglass has significantly higher strength-to-weight ratio.	Specific gravity = .51 (oven dried).*
FINISHING AND COLOR	Pigments added to the resin provide colour throughout the part. Special colours available.	Must be primed and painted for colours. To maintain colour, repainting may be required.
COST	Lower maintenance, longer product life = lower overall costs.	Lower initial cost.

\*Surface dry at 19% max moisture content *Design Values for Wood Construction*, National Design Specification for Wood Construction.