



Cygnet Texkimp offer a range of filament winding solutions for processing multifilament tows. Equipment may be tailored to your application, with the number of axes and data input method dependent on component complexity.

Cygnet Texkimp also offer full integration of the filament winder into an automated cell, incorporating the manufacturing process from mandrel preparation, resin mix and application and curing, up to final part inspection and packing.

For more information, contact us:

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Filament Winding for:

- Dry Fibre - Carbon, Aramid, Glass, Dyneema, etc.
- Tow pregs
- Slit tapes

# FILAMENT WINDING SYSTEMS

Specification can be varied to suit any requirement

<b>Process</b>	Filament winding of multiple tows onto a rotating mandrel or base component
<b>Materials / Applications</b>	Carbon, Aramid, Glass, Dyneema etc. Thermoset or thermoplastic tapes
<b>Typical Speed</b>	Fibre speeds of 60 metres per minute typical.
<b>Winding tension</b>	1 to 1000N measured at point of application
<b>Typical Winder Specification</b>	<ul style="list-style-type: none"> <li>• 4 Axis filament winder               <ul style="list-style-type: none"> <li>- A axis: Rotation of the mandrel</li> <li>- X axis: Axial feed head traverse. Max speed 1m/s</li> <li>- B axis: Rotation of the feed head +/-90 degrees</li> <li>- Y axis: Radial movement of the feed head</li> </ul> </li> <li>• Winding angle: +/- 10 degree to 90 degree</li> <li>• Maximum winding tension: 250N</li> <li>• Mandrel Diameter: 10-500mm</li> <li>• Mandrel weight: up to 500kg</li> <li>• Traverse length: 100-4000mm</li> </ul>
<b>Features available</b>	<ul style="list-style-type: none"> <li>• Full driven control of fibre tension for constant fibre tension between hoop and helical courses</li> <li>• Stationary creel minimising head loads</li> <li>• Powered or manual tailstock positioning</li> <li>• Multiple end fibre feeding</li> <li>• Online spreading of the tow</li> <li>• Fully metered resin application</li> <li>• Exotherm alert</li> <li>• Integrated data logging Integration with winding software.</li> <li>• Automated handling of wound components through downstream processes</li> <li>• Dual mandrel drive, both head and tailstocks synchronised</li> <li>• Integrated sensor placement. For RFID or strain gauges</li> <li>• Mandrel heating; Hot air or electrical</li> <li>• Mandrel End loading provided through driven tailstock system</li> <li>• Automatic load/ unload systems for integration into a complete manufacturing system</li> </ul>