



Unwinding technology for Polyacrylonitrile (PAN) tow into a carbon fibre oxidation & carbonisation process. Cygnet Texkimp's unique VHD CREEL design is the world leading technology for the processing of multi-filament precision wound packages into the ox-carb process. Cygnet Texkimp currently have in excess of 15,000 operational spindles installed globally. The layout of these large creels is designed over multiple levels to minimise their foot print and offering bespoke configurations. Integrated robotics and handling equipment is often included to minimise process down time and minimises fibre damage during loading.

Cygnet Texkimp offer both mechanical and fully driven electrical tension control. The mechanical system allows the lowest possible running tension from a non-driven system whilst maintaining full control of the unwinding tow. The fully driven system allows low and constant tensions which are unaffected by package diameter, weight, 'out of balance' or process speeds.

Another variant of the precursor creel is the Cygnet Texkimp box creel system, which consists of a mechanical guiding and tension system to allow precursors to be unloaded from bulk containers.

Cygnet Texkimp maintains a family of creel products to suit a wide range of package sizes. These products are often used for smaller tow count precursors or in pilot scale production and testing facilities.

PRECURSOR/PAN CREEL

Specification can be varied to suit any requirement

Process	Unloading of Precursor into thermal / mechanical processes, e.g. carbon fibre manufacture from PAN precursor.
Materials / Applications	Polyacrylonitrile (PAN) for the production of Oxidised PAN and Carbon Fibre
Typical Speed	0.5 m/min to 20m/min
Unwinding	Type : Unrolling of packages or drawing from boxes Yarn Paths : Vertical or Horizontal
Typical Arrangement	Configuration on single and multiple floors to suit site application Top sheet preparation of the web for downstream processing Customisable, trolley or fixed design
Packages	Type : Precision cross-wound packages or tubes Bulk Containers Max. Traverse : Typically 750mm Max. Dia : Typically 850mm Max. Weight : 500kg (1,100lb) Bulk Containers Max. Dim : Typical 1000mm x 1000mm x 1500mm tall Max. Weight : Typical 500kgs (1,125lbs)
Features Available	All fibre direction changes are via large diameter rollers. Minimum fibres stress to minimise fibre filamentation. Centrally adjustable tension system for optimum process control. Unique package holder design for easy loading and doffing. Vertical or horizontal feed. End break detection Package handling and loading systems available Various mobile options to optimise loading, handling and minimise process line downtime
Features – Electrical Driven	Fully driven system ensuring constant tension unaffected by package diameter, weight or process speeds.
Features – Mechanical	Individual quick stopping at each position. Controlled unwinding without over rotation in event of out of balance packages.