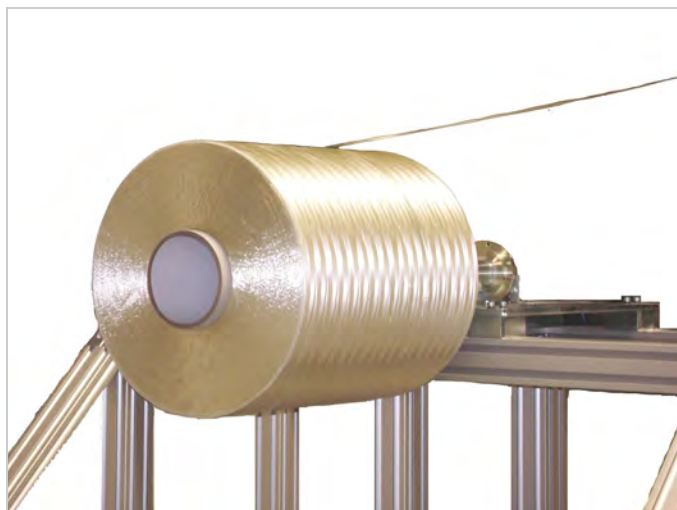


# PC Series Precursor Tensioning Creel System

## Features

- Unwinding type electrical tension control
- Tension control systems include
  - feedback load cell control
  - ultrasonic diameter measurement
  - manual torque adjustment
- Tension set by main control panel, can be changed simultaneously for all positions or in zones depending on requirement
- Minimal contact with the fiber = minimal damage to the fiber
- Custom designed frame structures and fiber routing to accommodate customer requirements



## Applications and Fiber Types

- For carbon fiber production plants and pilot line facilities for carbon fiber
- PAN precursor 3K up to 80K

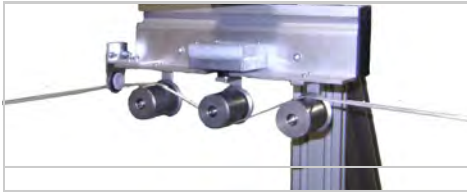
## Specifications

Tension control types	Model PC-CTF: feedback tension control with load cell Model PC-CTD: diameter detection tension control with ultrasonic sensor Model PC-CTV: manual or PLC controlled tension with torque adjust controller
Tension Range	Determined upon each application.
Speed Range	max 20 (m/min)
Compatible Package Sizes	Max 736.6mm (29" ) traverse Max 800 mm (31.5" ) outer diameter Max 350kg packages Other sizes available upon request
Compatible Package Cores	ID: 133, 140, 144mm cores Core sleeve adapters available for requirements to run multiple type cores
Creel Framework	Frame configuration examples shown on next page. Standard and custom configurations available
Fiber guiding	Pin combs, eyelet guides, and yarn guide rollers
Optional equipment	Below equipment available also. Manual package loading systems Provisions for box precursor Automated loading systems Core adapters Data acquisition systems

Please contact Izumi International, Inc. for special requirements

## Component Details

### PC-CTF Series Creel



Picture above shows tension load cell for PC-CTF type creel.

- Large roller, shallow angle to prevent fiber damage
- Feed-back control provides high accuracy tension
- Prevents loose tension and overfeed caused by packages with poor weight distribution

### PC-CTD Series Creel



Picture above shows ultrasonic sensor for PC-CTD type creel.

- Ultrasonic sensor enables automatic torque adjustment depending on diameter measurement
- No contact to prevent fiber damage.
- Sensor can be provided for limited positions or all positions, depending on customer requirements.

### CTS Setting Unit

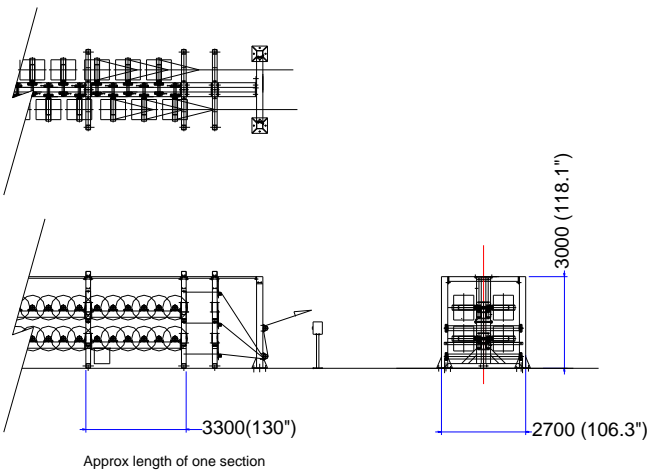


Picture above shows basic tension setting interface for all PC series creels.

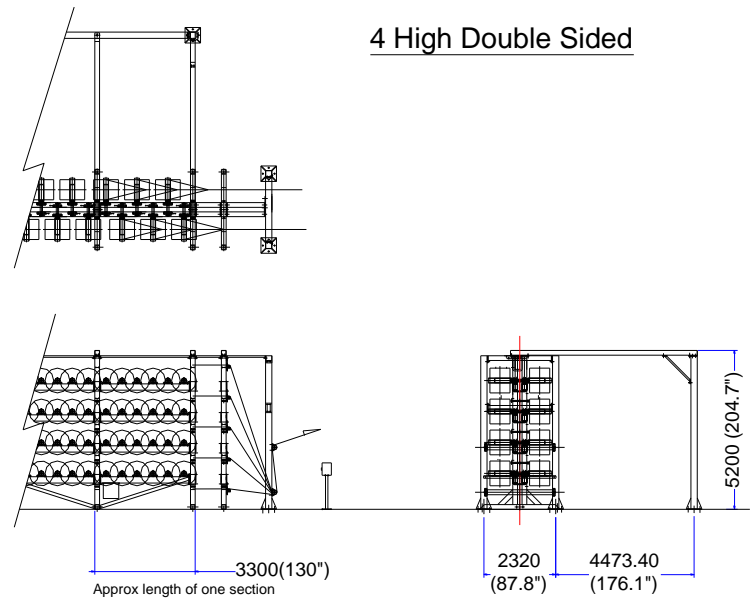
- Simple digital interface for easy tension control
- Basic initial parameters input via CTS unit.
- Other HMI interface available upon request as well as interfacing with customer control system.

## Layout Drawing

### 2 High Double Sided



### 4 High Double Sided



Above drawing shows approximate dimensions for 2-high and 4-high PC series creel with dia 800mm package.

Other configurations are possible, please consult Izumi International for special requirements.

**UNITS: mm (inch)**