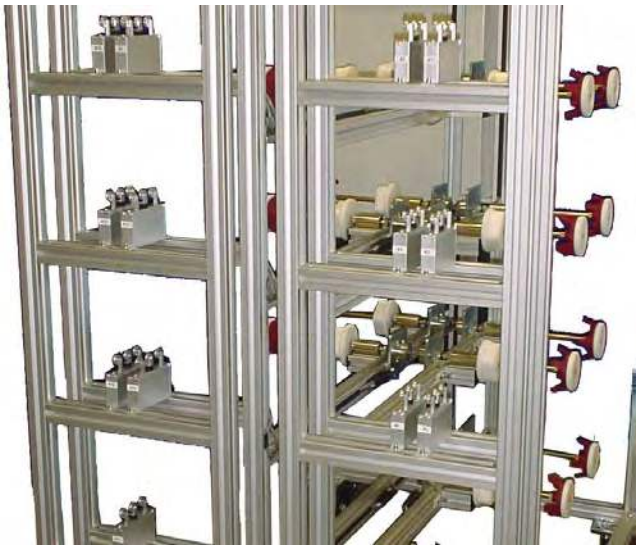
DTH-CTF Tension Feedback Creel System

Features

- Unwinding type electrical tension control
- Tension control systems include feedback tension control via tension sensor
- 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 (PAN and pitch), aramid fibers, glass fibers, and other high performance fibers
- R&D and lab type applications as well as production applications

Specifications

Tension Controller	Model CTF: - CTF1200 type for single position control. CTF1400 type for 4 channel control. (one CTF1200 is supplied for each position, or 1 CTF1400 is supplied for every 4 positions) - 10 level stability setting is available for different environments.
Tension Range	Determined upon each application. Up to max 200N.
Speed Range	max 500 (m/min), but depends on tension ranges and application details
Compatible Package Sizes and core sizes	Variety of core chucks available to meet application requirements
Tension actuator	Standard actuator lineup consist of below: OPB electromagnetic particle brakes, OPC electromagnetic particle clutches, HB electromagnetic hysteresis brakes, HC electromagnetic hysteresis clutch
Creel Framework	Aluminum extrusion structure for lightweight packages, steel tubing structure for heavyweight packages and large scale creels.
Fiber guiding	Pin combs, eyelet guides, and yarn guide rollers
Tension sensors	Complete lineup of tension sensors available. Tension sensors from 0.5 N to max 200N range are available. Rollers widths from 2.5mm to 42mm wide. Also wide web rollers (600mm) are available. (see following page for details on sensor types)
Interface, other	Standard interface is CTS1130 unit. Separate HMI can be supplied for complex systems. One CTS controller can support 14 units of CTF1400 (max 56 channels) Tension can also be controlled via analog voltage input for systems requiring control from a central master control system.

Please contact Izumi International, Inc. for special requirements

IZUMI INTERNATIONAL, INC.
1 Pelham Davis Circle, Greenville, SC 29615 USA
Tel: 864-288-8001 Fax: 864-288-7272
E-mail: us-sales@izumiinternational.com
Web: www.izumiinternational.com

IZUMI INTERNATIONAL CO., LTD.
3-20-10 Toyosaki, Kita-ku, Osaka, Japan
Tel: 06-6375-4116 Fax: 06-6375-4117
E-mail: jp-sales@izumiinternational.com
Web: www.izumiinternational.com

Component Details

CTF Type Feedback Controller

Picture above shows dedicated feedback type controller for DTH-CTF system.

- Adjustable stability factor changes response time for tension control.
- Direct analog voltage input available for setting tension.
- Analog output for tension monitoring is available.

Actuators

Picture above shows different type of actuators for torque generation

- OPB/OPC type electromagnetic particle brakes and clutches
  0.5 - 8 [Nm] selection range
- HB/HC type electromagnetic hysteresis brakes and clutches
  0.05 - 1 [Nm] selection range

CTS Setting Unit

Picture above shows basic tension setting interface for all CTF 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.

Tension Sensor Details

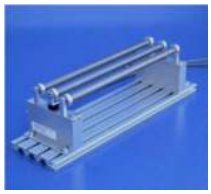
Standard Range Sensors

Type	Range N (grams)	Roller Width (mm)
DTH2200	0.5 (50)	2.5
DTH3210	1 (100)	12
DTH4210	2 (200)	12
DTH5210	5 (500)	12
DTH5240	5 (500)	42
DTH6210	10 (1000)	12
DTH6240	10 (1000)	42
DTH7210	20 (2000)	12
DTH7240	20 (2000)	42
DTH8210	30 (3000)	12
DTH8240	30 (3000)	42

High Range Sensors

Type	Range N (grams)	Roller Width (mm)
DTL2220	50 (5000)	22
DTL2260	50 (5000)	62
DTL3220	100 (10000)	22
DTL3260	100 (10000)	62
DTL4220	200 (20000)	22
DTL4260	200 (20000)	62

Wide Web Sensors



Type	Range N (grams)	Roller Width (mm)
DTW5220	10 (1000)	210
DTW5240	10 (1000)	410
DTW5260	10 (1000)	610
DTW6220	20 (2000)	210
DTW6240	20 (2000)	410
DTW6260	20 (2000)	610
DTW7220	50 (5000)	210
DTW7240	50 (5000)	410
DTW7260	50 (5000)	610

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