

Product Brochure

2 About TTS



The company was formed in 1997 to design, manufacture and provide full support for a wide range of web tension products as used in the process and converting industries. Our fully comprehensive product line includes load cells (transducers), web tension amplifiers as well as our own range of intelligent web tension control products.

Modern industrial processes today are becoming more heavily dependent upon feedback from sensors for the purpose of automation and control. From simple measurement to complex web tension control our products have been carefully designed to meet your demands. Whether you are interfacing to a motor, a pneumatic brake or electromagnetic clutch we will have a product that is right for your application.

Our products interface with the majority of proprietary AC & DC motor drive controllers, PLC's and other similar control modules used throughout the web process and converting industries.

Our global installations cover a wide range of manufacturing processes, encompassing a multitude of applications many of which have been specifically engineered for our customers. Some of the areas covered include paper, board, tissue, non wovens, plastic film & foil, textile, printing, converting & coating and machine builders.

As an innovative company we lead the way in the design of web tension load cells (transducers), web tension controllers, web tension amplifiers and indicators.

We are also agents for the ED & A range of telecontrollers - which combine control, telemetry and data logging functions in one package. Due to their unique ability to withstand reverse engineering they are finding popularity amongst many exporters.

Advantages to partnering with TTS

- Company established since 1997
- Extensive personnel experience gained over 40 years
- Worldwide customer base
- Emphasis placed on quality, reliability and ease of use

- Wide product range suitable for most applications
- All products fully supported by TTS
- Responsive, reactive in house technical support available
- Good solid repeat business with many long standing customers

Global Solutions

Our many customers from around the world have benefitted from the experience and expertise of the TTS Team when applied to their many and varied converting applications.

Within the converting process there are many unwanted influences that can affect product quality during manufacture. Good web tension monitoring and control is essential to maintaining consistent quality, uninterrupted operation and optimised speed of production. In this regard TTS products have been engineered to provide exceptional performance and reliability.

Our focus is to work with the client to identify and optimise the correct solution for the application.







TTS Versatility

The centre image shows an application which uses an adapted form of our cantilever load cell. The application produces aircraft fuel lines, due to high scrappage rates the customer needed an improved tension control system. Each machine has four rotating arms with varying wrap angles, thereby complicating the measurement process.

By using an additional algorithm in the PLC the change in signal was compensated for and production yields improved significantly. TTS provided a solution by substituting an existing roller and embedding our load cell into the new roller. The rear extension shaft also provided easy mounting and exit for the cabling.



Full technical details, manuals and software can be found on our website www.tts-systems.com

Cartridge Load Cells







CRF or CRL with Plummer Block



CRF or CRL with Flange Kit

A versatile cartridge style load cell that can be supplied with the head assembly either fixed for static shaft (CRF) or for use with a rotating shaft (CRL).

This cell benefits from having a variety of fixing kit arrangements which are designed to meet your applications mechanical requirements. There is a Plummer block kit where the cell slots into the housing or a flange fixing kit where the cell is fitted to the base of the cell and then attached securely to the side of a frame. In all cases the cell can be rotated to meet the wrap angle conditions. Rotating the cell can also help reduce the effect of high roll weights or low tensions.

All Cell Types

- Twin beam machined from high grade steel
- High spring constants
- Positive overload stops
- Full Wheatstone bridge
- Independent measurement on each side
- Multi angle capability
- High transient overload protection
- 10 Volt excitation

Full technical details and manuals can be found on our website



CRB Hub Style

A simplified form of the cartridge body. The cells are supplied complete with stainless steel hubs which are pressed into the end of a simple tube to form a complete assembly allowing a simple roller to be manufactured.



CRCI Cantilever Style

Another variant of our cartridge cells is the CRCI type. These cells are supplied complete with integrated roller. Typical uses are applications where a narrow width web is employed.



Bespoke Designs

Using our knowledge and experience we can adapt many of our standard arrangements to meet specific demands. Talk to us to find out more.

Cartridge Series Features

- Versatile fixing arrangements
- Single mounting bolt or multi fixing points
- Flange accessories
- Plummer block accessories
- Head assembly fixed or static
- Nominal forces (in Newtons) style dependant
- 100, 250, 500, 1000, 2500, 5000
- Choice of connecting socket

Amphenol

M12 series capable of adjustment

PG gland + fixed cable

- Self aligning bearing catering for misalignment
- End float capability
- Positive overload capability

Flat Bed Load Cells & Calculator



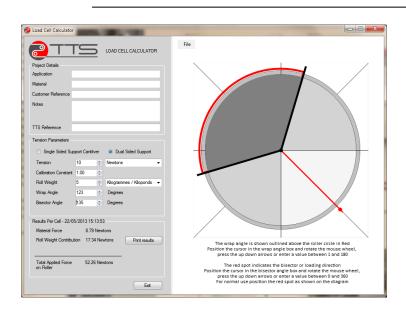




Flat Bed Stainless Steel

Lightweight but very strong these cells are designed to fit under Plummer block bearing housings. Our unique design ensures they are protected from web wraps and high transient loading. These cells may be mounted at any angle and they are the perfect partner for almost all applications.

Where harsher conditions exist TTS recommend using the stainless steel variant.



Flat Bed Series Features

- ♦ Exceptional overload range
- Exclusive overload protection design
- Nominal forces (in Newtons) size dependant 1000, 2500, 5000, 10000, 15000, 20000, 25000
- Choice of connecting socket

Amphenol

M12 series

PG gland + fixed cable

♦ Choice of Material

HE15 Aluminium

Stainless steel

♦ High temperature option to 200° Celsius

Full technical details and manuals can be found on our website

Product Assistant Software

Our load cell tension calculator is available for download from our website at

www.tts-systems.com/prod-calculator.htm

If you would prefer we will be happy to help with your calculations and offer any relevant advice.

Contact us on 01233 624422 for more information

Amplifiers and Controllers

TTS load cell amplifiers and electronic modules are designed to make installation and commissioning simple, quick and easy.

Using high quality components the integrity of the measuring function is ensured.

All our products operate from a 24V DC supply.

Visit our website to see our full range of electronics

www.tts-systems.com



DCA-10 Load Cell Amplifier

With easy push button calibration and multiple outputs this amplifier has proven to be a winner among OEM's and End Users alike.



SCA-10 Load Cell Amplifier

Complementing and based upon the popular DCA-10 this lower cost alternative can provide a single 0 -10V or 4- - 20mA output signal.



LCA-3 Series

The LCA-3 web tension amplifier from TTS has a 6 digit display and can be supplied with an optional 0 - 10 Volt analogue output.

TTS also supply a range of displays and counters.



PID-10 Control Module

A simple module for providing a PID control loop that can be connected to any pneumatic brake to give a precise but simple tension control system.



CDM Electric Brake Control

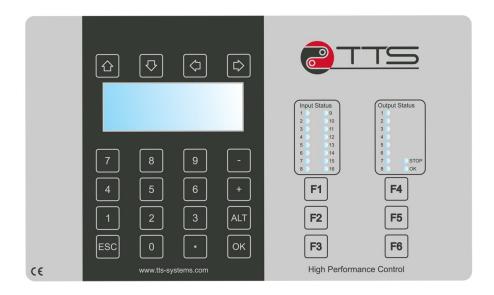
Controlling an electric brake or clutch is made simple using this module. Either a 3 or 6 Amp version is available meeting the needs of most applications.

High Performance Tension Controller

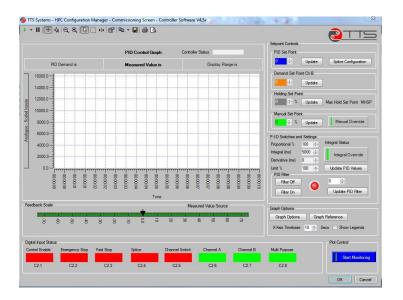
High Performance Tension Controller (HPTC)

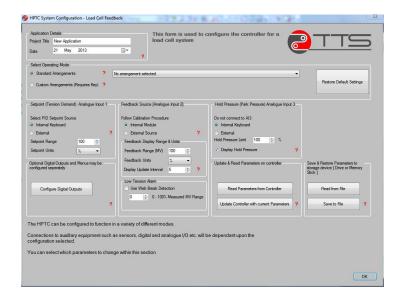
- Fully programmable PID controller
- Programmed via TTS Windows interface
- Graphical Interface for monitoring performance
- Data logging functions
- Can be used with load cells and dancers
- Minimal operator involvement
- 24 Volt supply, panel mounted

The HPTC tension controller from TTS is a versatile multi functional device. Our graphical configuration interface provides data logging and diagnostics in one unique package.



Full technical details, manuals and software can be found on our website www.tts-systems.com





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One Stop Shop

We also supply Brakes, Clutches and Web Guide Systems from leading manufacturers around the world. Whether it be a new system or spare parts, we can offer competitive prices and delivery options.