

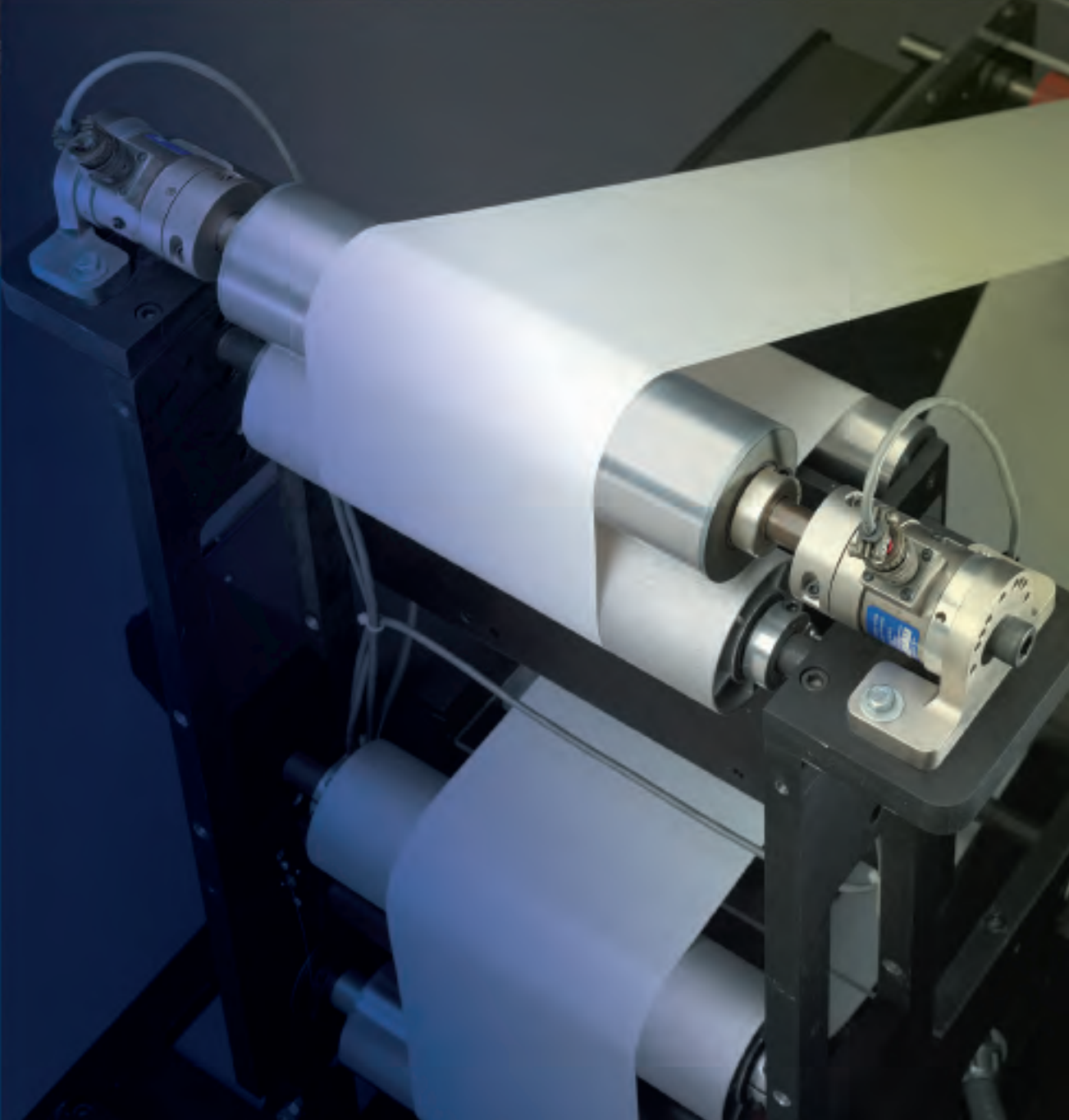
**MAGPOWR®**

A Maxcess  
International  
Company

# *Tension Control Solutions*

*Advanced Web Tension  
and Torque Control Technologies*

M A G P O W R T E N S I O N C O N T R O L P R O D U C T S



## Load Cells & Readouts



## Pneumatic Brakes



## Magnetic Particle Glutches & Brakes



## Tension Controls



## Permanent Magnet Glutches & Brakes



 A Maxcess  
International  
Company

*Complete tension control solutions for any application.*

T A B L E O F C O N T E N T S

- Introduction ..... 2-3
- Tension Monitoring..... 4
- Manual Control..... 5
- Open Loop Follower Arm..... 6
- Open Loop Ultrasonic..... 7
- Ultrasonic Free Loop..... 8
- Closed Loop Load Cell..... 9-10
- Closed Loop Load Cell Field Bus..... 11
- Closed Loop Dancer..... 12
- Product Selection Chart..... 13

### Unmatched Control

Accurate tension and torque control is crucial to the success of any web process. Whether you're working with film or foil, paper or wire, MAGPOWR products are designed to deliver just what you need: maximum output and minimum waste.



From our simplest brake to our most advanced digital controls, our products are the result of over 40 years of experience. By offering a broad range of tension controls, tension readouts, load cells, brakes and clutches, you have the flexibility to build a system that best meets the needs of your application.

### Application Expertise

MAGPOWR has the largest installed base of torque and tension control systems in the industry. Because no two problems are alike, that wealth of knowledge means our engineers are equipped to provide you with a solution specifically designed to fit your application.





### Superior Service

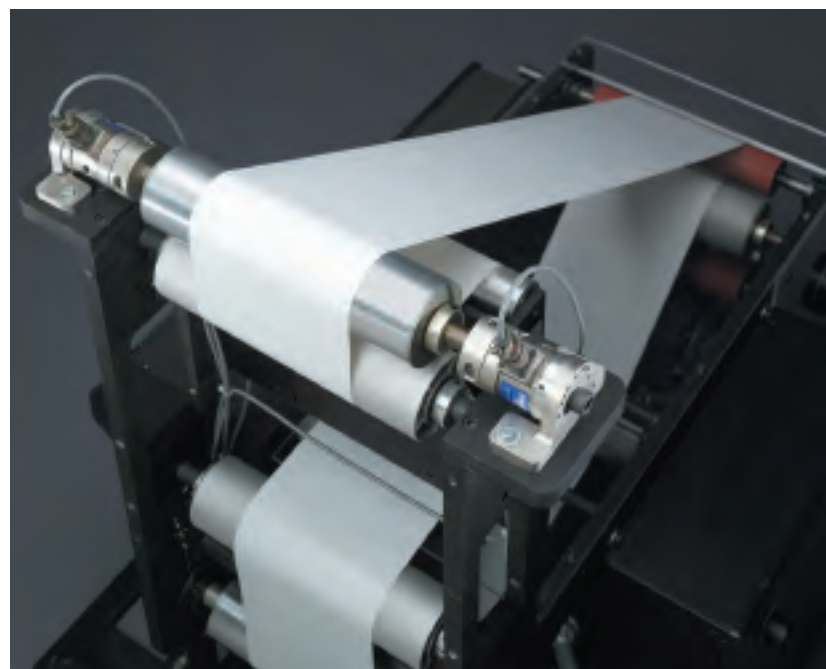
As always, our goal is to engineer and develop products that consistently outperform the competition, and deliver the results you desire. MAGPOWR has an experienced, factory-trained staff to assist in all areas of tension control: applications analysis, design and engineering.

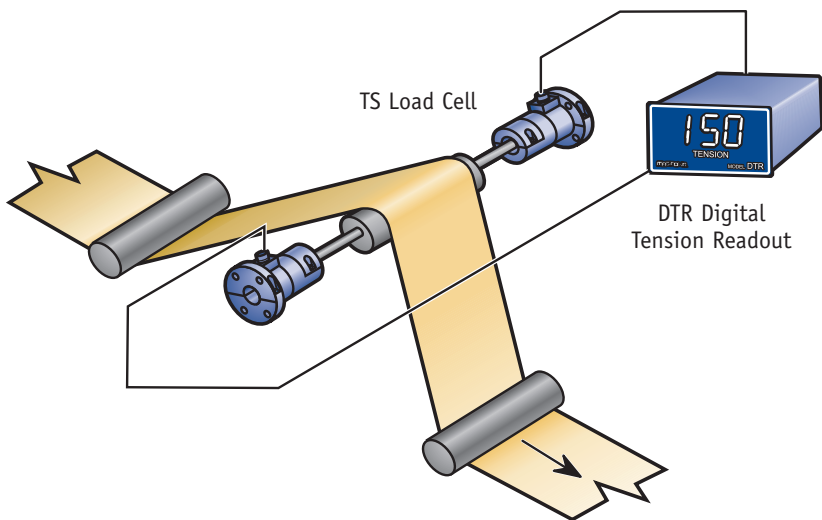
### Industry Leadership and Education

We recognize the importance of training and education to the growth of our industry. That's why MAGPOWR actively supports university research as well as an aggressive R&D program. We also contribute to Maxcess University, on-site and online training that covers the theory and implementation of web handling technology in multiple formats that are easy to use and understand.

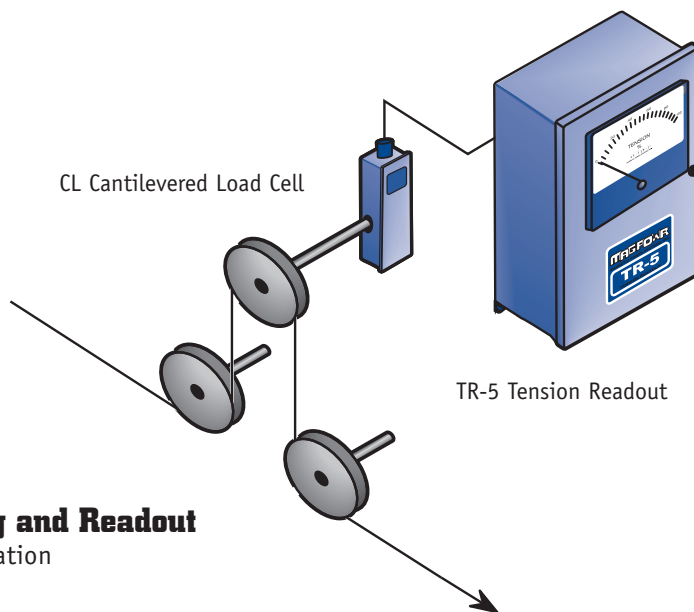
### Global Presence • Comprehensive Offering

As a Maxcess International Company, we can provide you with the most comprehensive line of accessory product and systems - Fife Guiding and Inspection, Tidland Slitting and Winding, and MAGPOWR Tension Control. Our factory-direct Field Sales Engineers also provide you with a local resource for certified product knowledge and application expertise. Global operations include North America, South America, Europe, Asia and Australia.





**Tension Monitoring and Readout**

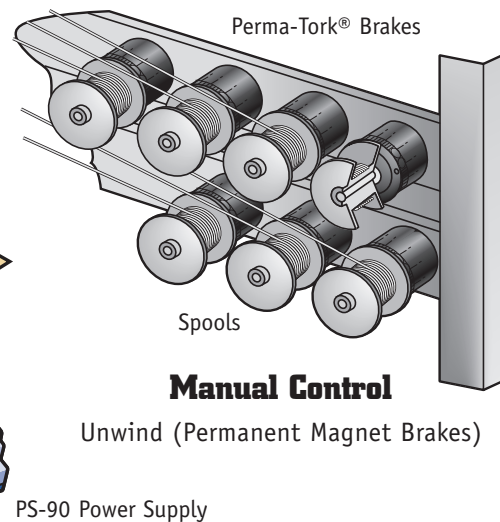
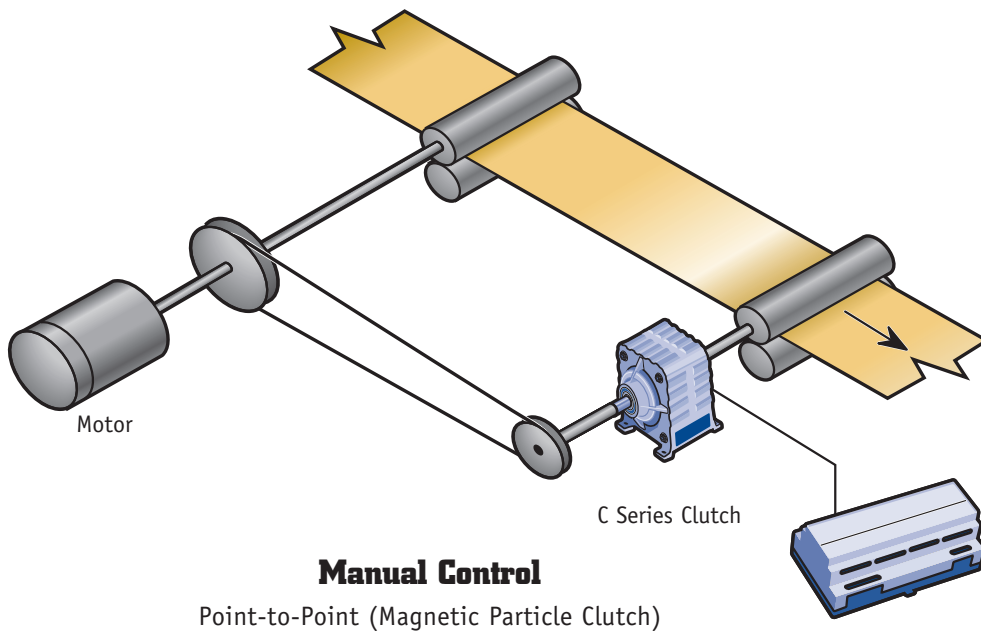
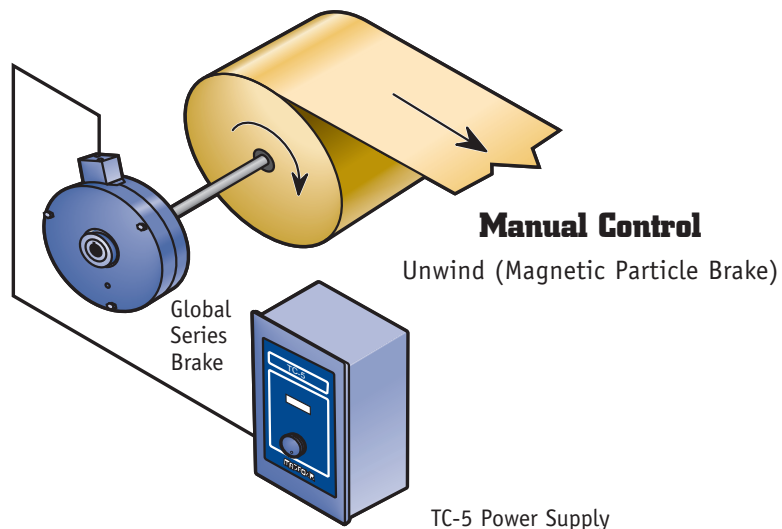
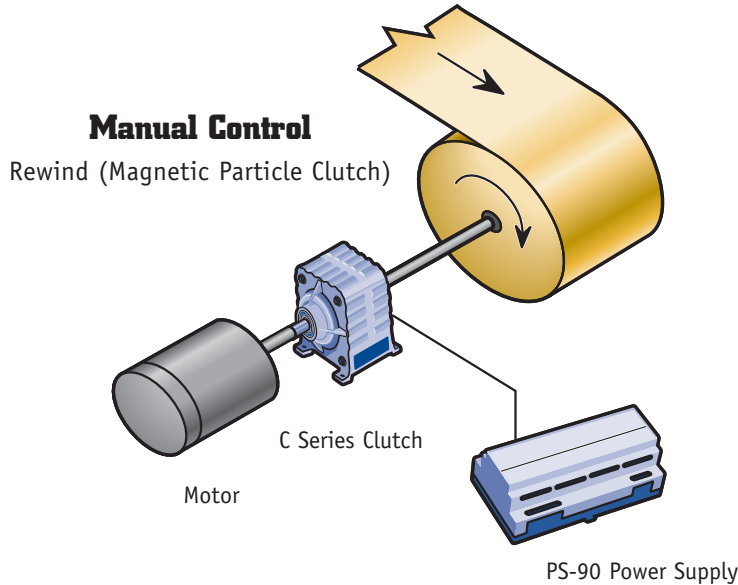


**Tension Monitoring and Readout**  
Wire Application

**Tension Monitoring**

MAGPOWR has a broad range of tension control products designed to deliver precise readouts every time. These products easily combine to create the ideal tension monitoring solution for your application.

- Analog and Digital displays available
- Amplifiers available to send a 0 to 10 VDC or 4 to 20 mADC signal to a PLC or motor drive
- Available mounting options: DIN Rail (CE), Wall Mount, Thru-Panel Mount

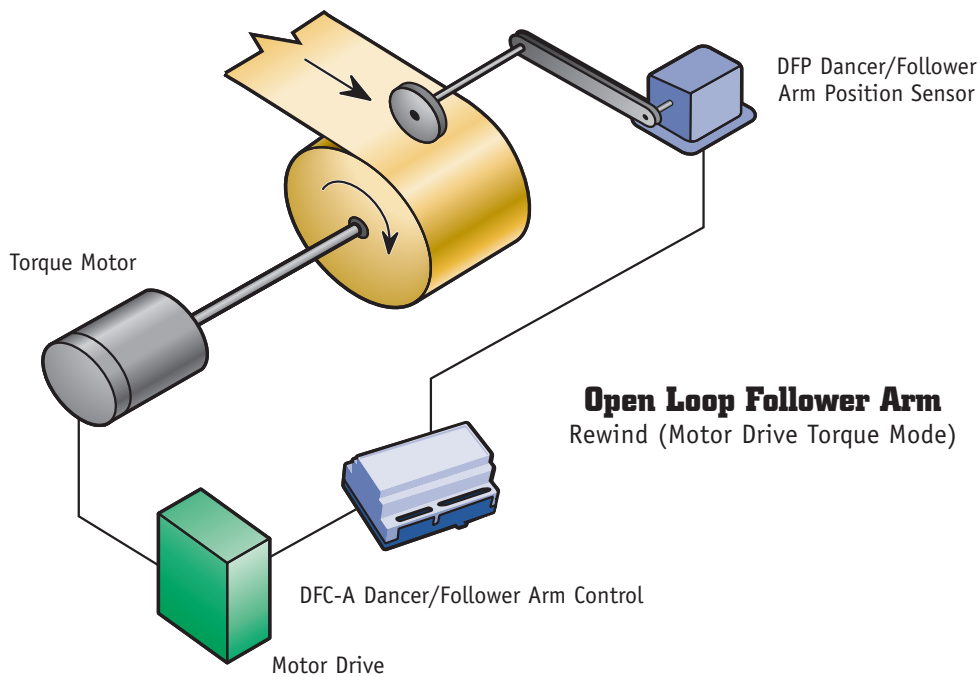
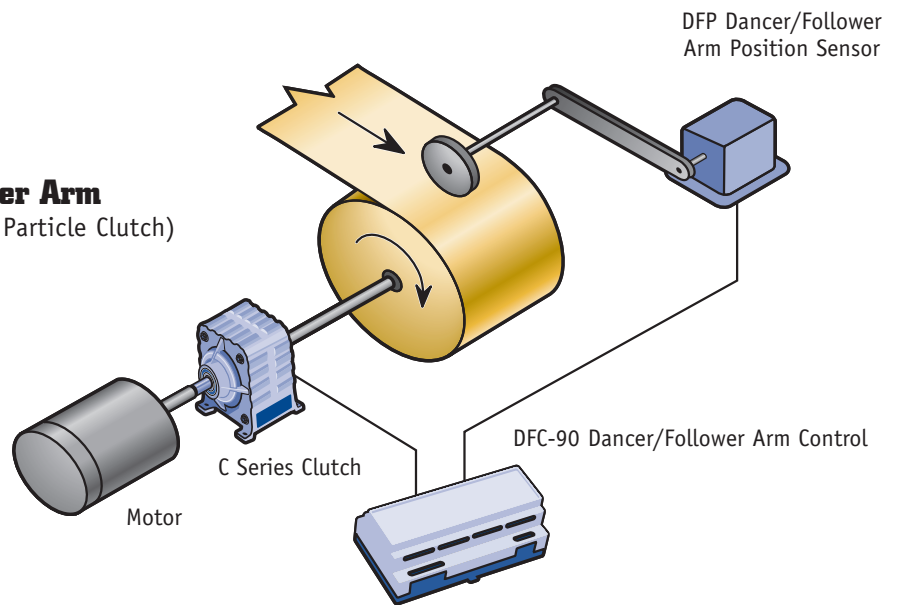


### Manual Control

MAGPOWR Manual Tension Control systems are a low-cost solution for Rewind, Point-to-Point and certain Unwind Applications. Our manual power supplies allow you to overcome residual magnetism and use the full range of your magnetic particle brake or clutch with their unique reverse current feature. These systems are ideal for (1) Rewind Applications where natural taper is needed, (2) Point-to-Point Applications where roll build does not change, and (3) Unwinds where material can withstand small changes in tension from roll to core.

- Manual power supplies are current regulated so output will not change as the clutch or brake coil rises from ambient to operating temperature
- 90 VDC and 24 VDC power supplies are available with jumper selectable current ratings to match the correct magnetic particle device for your application
- Available mounting options: DIN Rail (CE), Wall Mount, Printed Circuit Board

**Open Loop Follower Arm**  
Rewind or Unwind (Magnetic Particle Clutch)

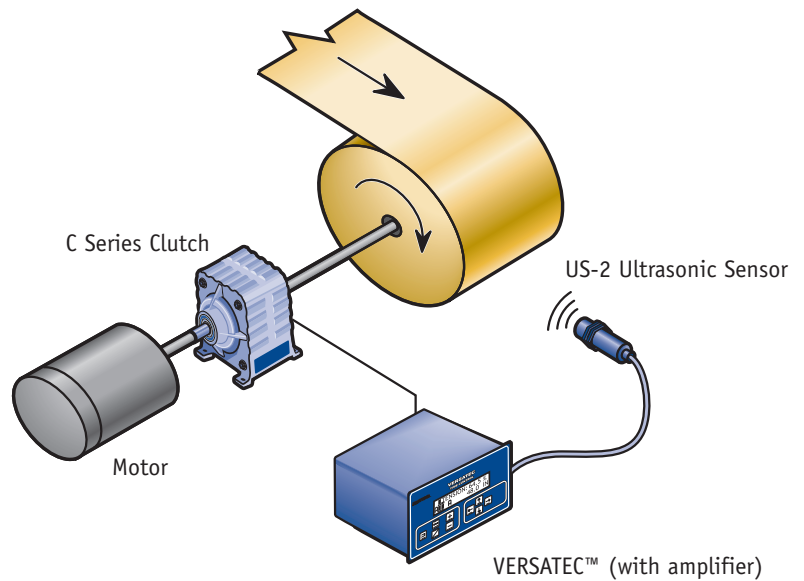


**Open Loop Follower Arm**

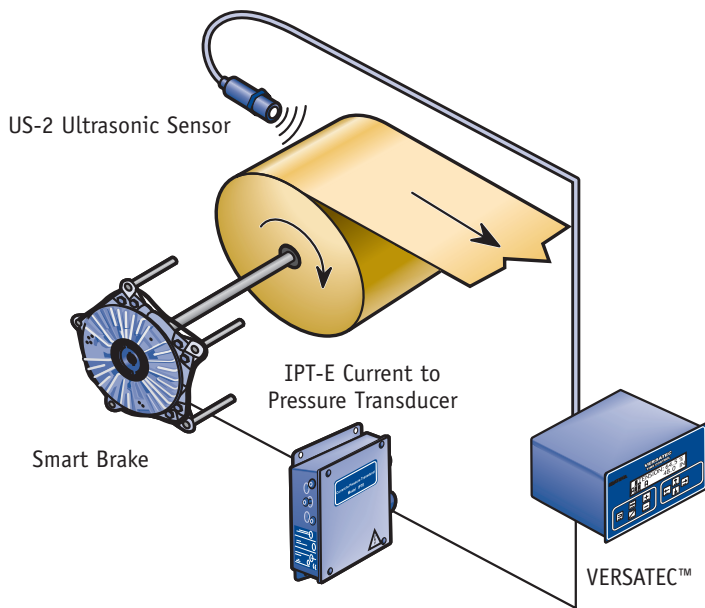
These easy to install systems provide tension control based on changing roll diameter.

- Available control outputs: 0 to 10 VDC, 4 to 20 mA DC, and 90 VDC
- Available mounting options: DIN Rail (CE), Printed Circuit Board





**Open Loop Ultrasonic**  
Rewind (Magnetic Particle Clutch)

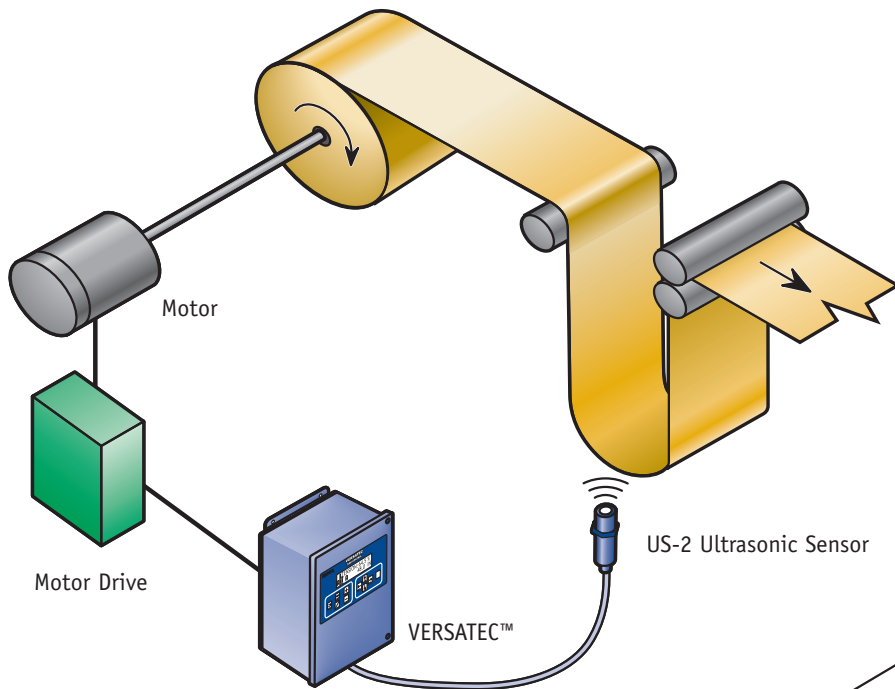


**Open Loop Ultrasonic**  
Unwind (Pneumatic Brake)

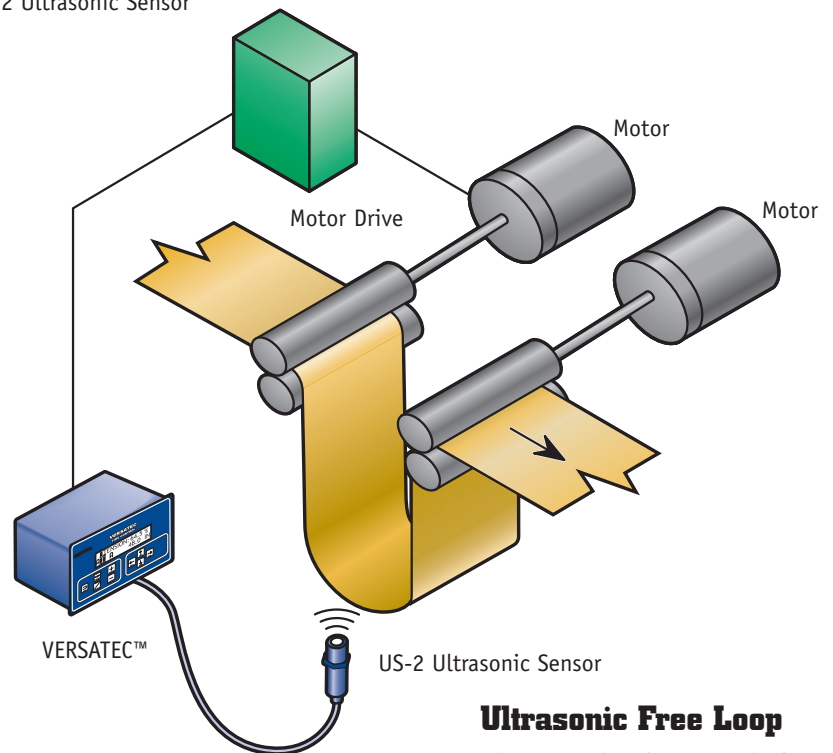
### Open Loop Ultrasonic

These systems are accurate, simple to engineer and easy to install. Tension control is based upon changing roll diameter, with no physical contact made to your web.

- Adjustable taper tension for rewinds also available
- Inverse Diameter Output available to slow rewind motor as roll builds, decreasing slip heat in clutches
- Available control outputs: 0 to 10 VDC, 4 to 20 mA DC, -10 to 10 VDC, 90 VDC, and 24 VDC
- Available mounting options: Wall Mount (CE), DIN Enclosure Mount (CE)



**Closed Loop Control**  
Free Loop Unwind (Motor Drive)

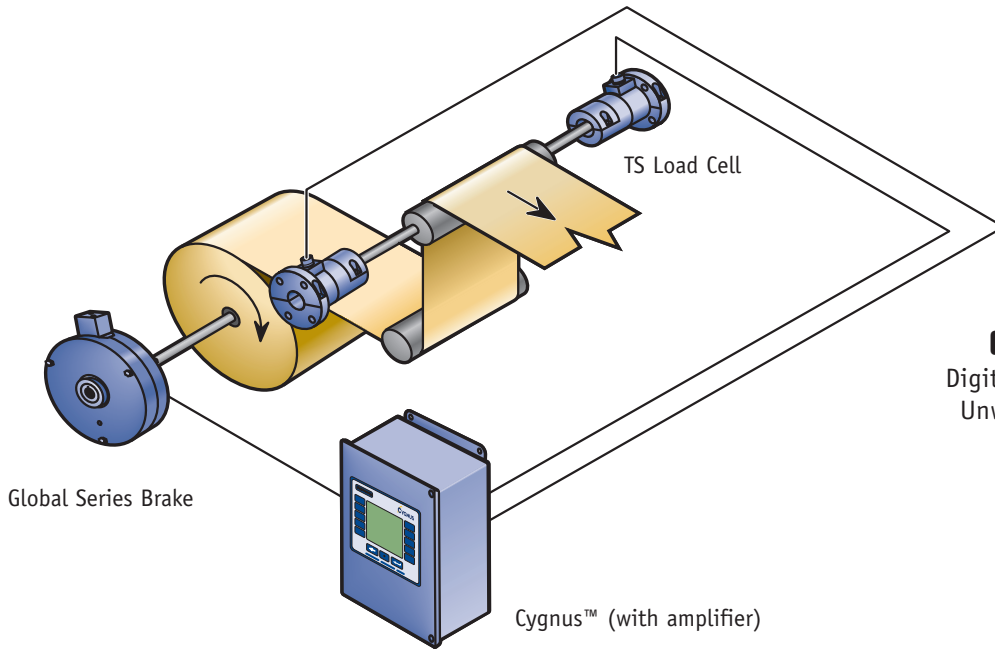


**Ultrasonic Free Loop**  
Point-to-Point (Motor Drive)

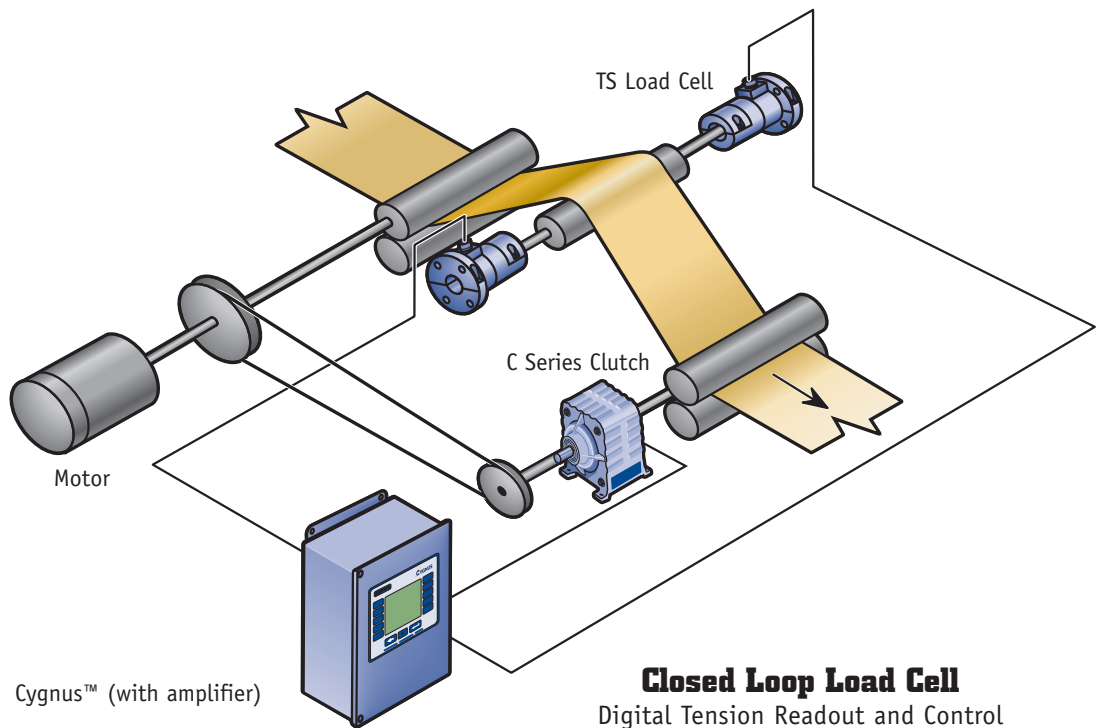
### Ultrasonic Free Loop

These simple to engineer systems provide a low-cost solution for speed control on applications where the weight of the web is enough to provide tension.

- For applications where the weight of the material provides adequate tension
- Ideal for start/stop applications or if unwind rolls are out-of-round
- Provides control through loop position feedback
- Mounting options: Enclosure Mount (CE), DIN Panel Mount (CE)
- Available outputs: 0 to 10 VDC, 4 to 20 mA DC, -10 to 10 VDC



**Closed Loop Load Cell**  
Digital Tension Readout and Control  
Unwind (Magnetic Particle Brake)

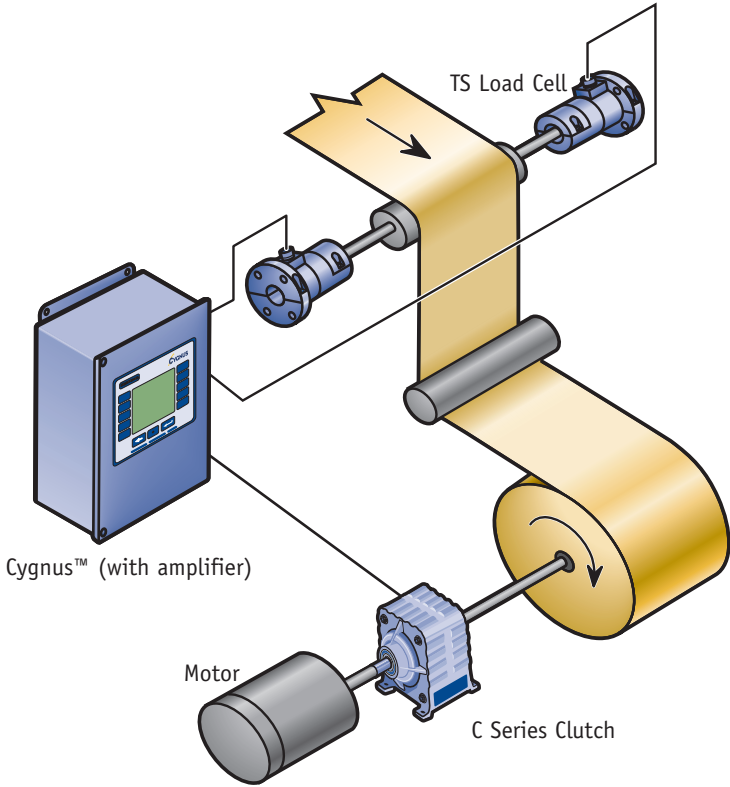


**Closed Loop Load Cell**  
Digital Tension Readout and Control  
Point-to-Point (Magnetic Particle Clutch)

### Closed Loop Load Cell

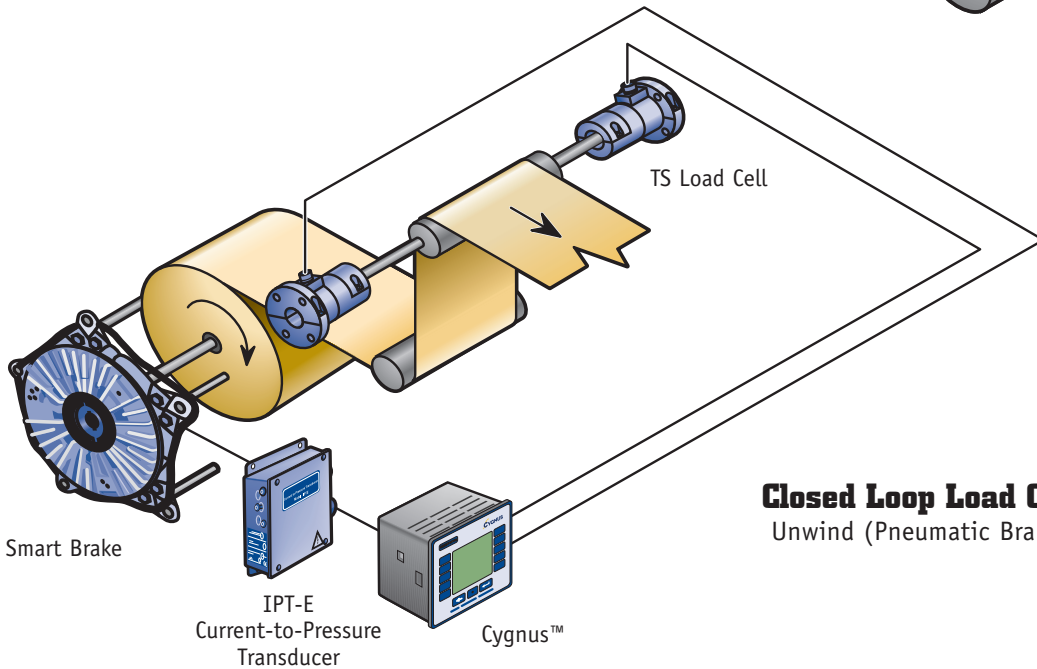
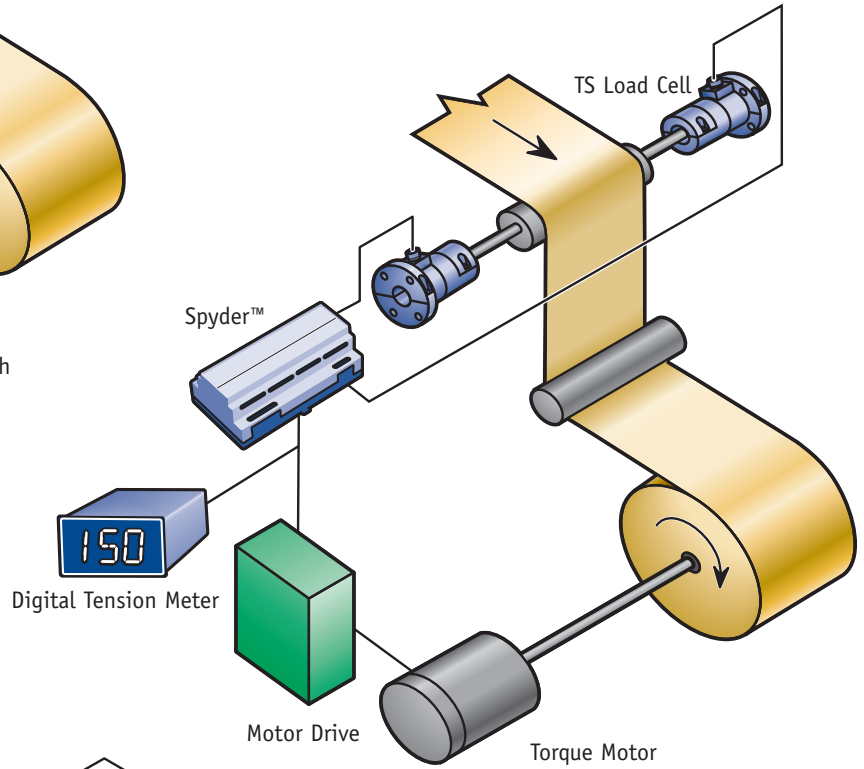
Designed to provide “actual” tension feedback, these product combinations will ensure you get the most accurate method of tension control available.

- Adjustable taper tension for rewinds standard
- Available control outputs: 0 to 10 VDC, 4 to 20 mA DC, -10 to 10 VDC, 90 VDC, and 24 VDC
- Available mounting options: Wall Mount (CE), DIN Enclosure Mount (CE), Printed Circuit Board

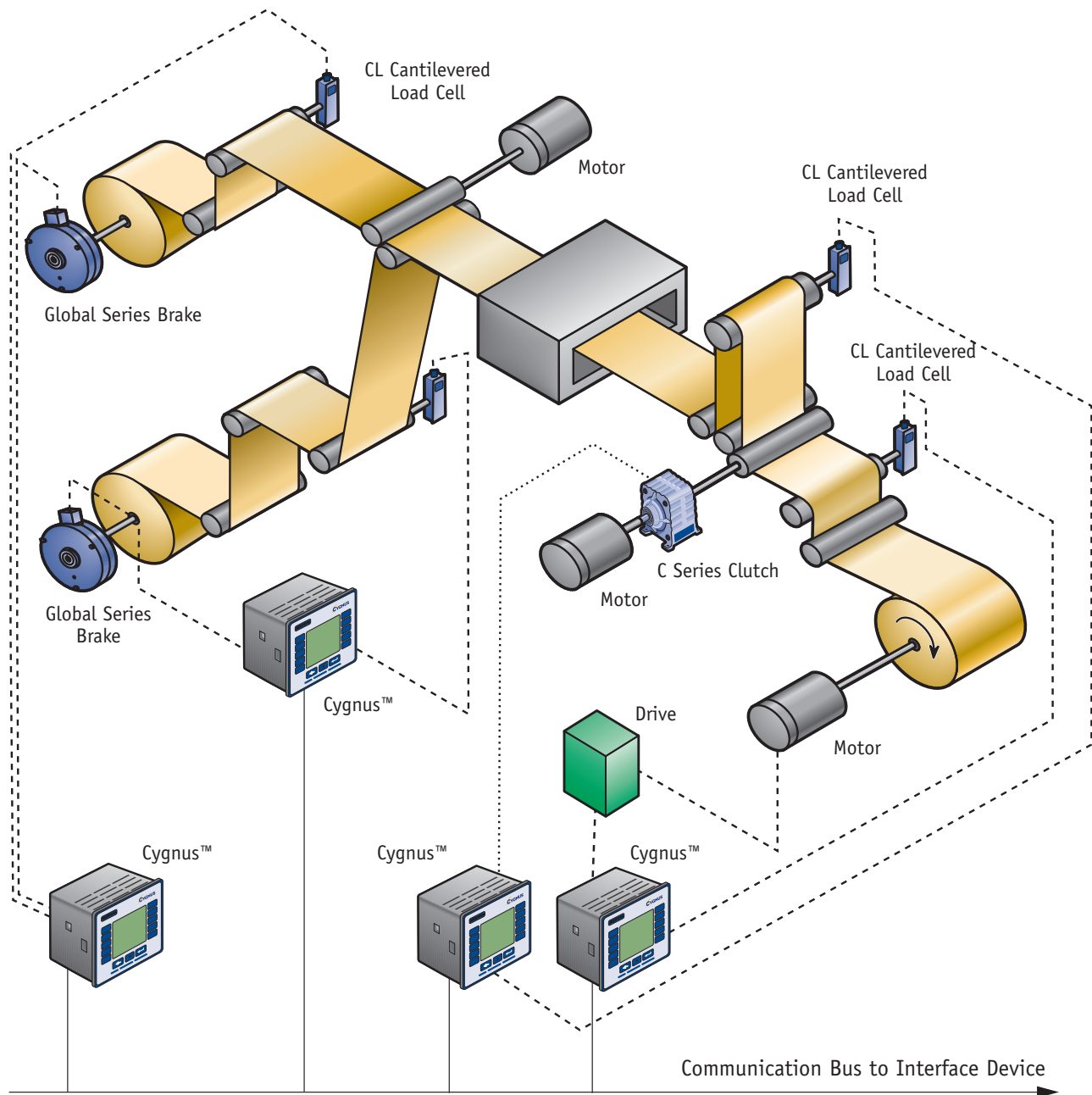


**Closed Loop Load Cell**  
Rewind (Magnetic Particle Clutch)

**Closed Loop Load Cell**  
Rewind (Motor Drive in Torque Mode)



**Closed Loop Load Cell**  
Unwind (Pneumatic Brake)

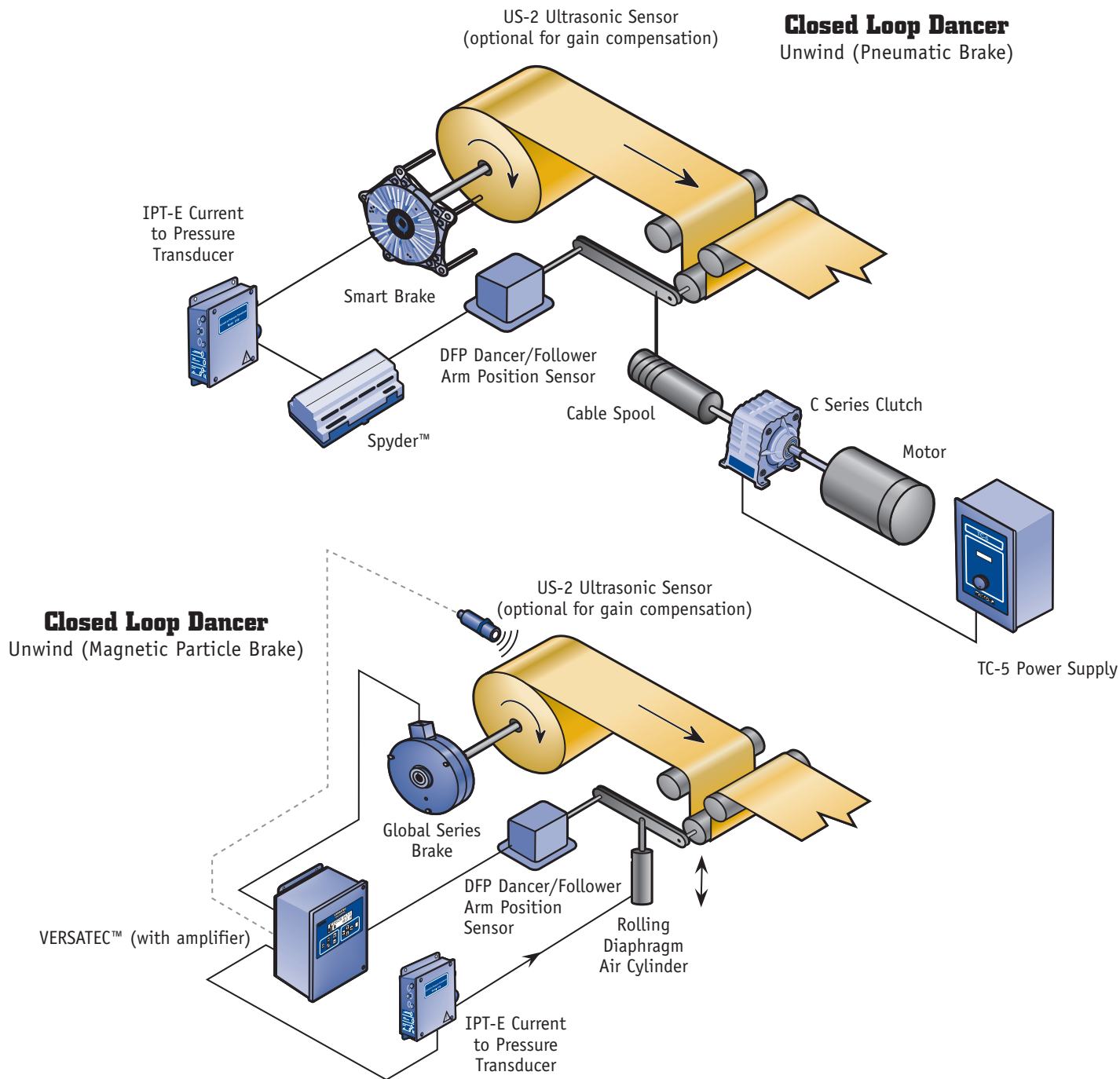


**Closed Loop Load Cell**  
Field Bus Application

### Closed Loop Load Cell Field Bus

Access and control multiple independent tension zones over an Ethernet IP, DeviceNet or Profibus DP network.

- EtherNet capabilities for networking and remote-access
- Available control outputs: 0 to 10 VDC, 4 to 20 mA DC, -10 to 10 VDC, 90 VDC and 24 VDC
- Available mounting options: Enclosure Mount (CE),



**Closed Loop Dancer**

These systems are the ideal choice for maintaining constant tension on start/stop applications or when unwind rolls are out-of-round.

- Inverse Diameter Output available to slow rewind motor as roll builds, decreasing slip heat in clutches (when using optional US-2 Sensor with VERSATEC™)
- Available control outputs: 0 to 10, VDC 4 to 20 mA DC, -10 to 10 VDC, 90 VDC, and 24 VDC
- Available mounting options: Wall Mount (CE), DIN Enclosure Mount (CE), DIN Rail Mount (CE), Printed Circuit Board

PRODUCT SELECTION CHART

For the tension control solution that is right for you, simply find your application in the chart below, then select the combination of MAGPOWR products that best suit your specific requirements.

	Cygnus-DIN/Cygnus-E Tension Control	Spyder Tension Control	VTC/VTC-E Tension Control	PA-90/PA-2 Power Amplifiers	US-2 Ultrasonic Sensor	DFC-90 DIN Mounted Tension Control	DFC-A DIN Mounted Tension Control	FAD Board Level Tension Control	TC-5/TC-5P Power Supply	PS-90/PS-24 Power Supply	381/23-1RPL Power Amplifier	IP7/IPTE/IP80 Tension Transducers	DFP/DFP-2 Position Sensors	TS/CL/GTS/TSU/LC Load Cells	DTR Digital Tension Readout	DTM Digital Tension Meter	TR-5 Load Cell Amplifier	TSA/LCA Load Cell Amplifier	IS-2 Intrinsically Safe Amplifier	9A22-1 Tension Meter	Smart Brake	C Style Magnetic Particle Clutch/Brake	Global Magnetic Particle Clutch	Global Magnetic Particle Brake	B Style Magnetic Particle Brake	SOFSTEP Magnetic Particle Clutch	SOFSTEP Magnetic Particle Brake	PERMA-TORQ Permanent Magnet Clutch	PERMA-TORQ Permanent Magnet Brake	
<b>Tension Monitoring and Readout</b>																														
Tension Readout														X	X	X	X	X		X										
Tension Readout in Hazardous Area														X		X			X	X										
<b>Manual Control</b>																														
Manual Unwind (Magnetic Particle)									X	X	X											X		X	X	X	X			
Manual Point-to-Point (Magnetic Particle)									X	X	X											X	X	X	X	X	X	X		
Manual Rewind (Magnetic Particle)									X	X	X											X	X			X				
Manual Unwind (Permanent Magnet)																														X
Manual Point-to-Point (Permanent Magnet)																													X	X
Manual Rewind (Permanent Magnet)																													X	
<b>Open Loop Ultrasonic</b>																														
Ultrasonic Unwind (Magnetic Particle)			X	X	X				X	X													X		X	X	X	X		
Ultrasonic Rewind (Magnetic Particle)			X	X	X				X	X													X	X		X	X	X		
Ultrasonic Unwind (Pneumatic)			X		X							X										X								
Ultrasonic Rewind (Motor Drive)			X		X																									
<b>Open Loop Follower Arm</b>																														
Follower Arm Unwind (Magnetic Particle)							X	X					X										X	X	X	X	X			
Follower Arm Rewind (Magnetic Particle)							X	X					X										X	X		X	X	X		
Follower Arm Unwind (Pneumatic)								X				X	X									X								
Follower Arm Rewind (Motor Drive)								X				X																		
<b>Closed Loop Ultrasonic</b>																														
Ultrasonic Free Loop Unwind (Motor Drive)			X		X																									
Ultrasonic Free Loop Point-to-Point (Motor Drive)			X		X																									
Ultrasonic Free Loop Rewind (Motor Drive)			X		X																									
<b>Closed Loop Load Cell</b>																														
Digital Tension Readout and Control Unwind (Magnetic Particle)	X	X							X	X			X	X					X	X		X	X	X	X	X	X			
Digital Tension Readout and Control Point-to-Point (Magnetic Particle)	X	X							X	X			X	X					X	X		X	X	X	X	X	X	X		
Digital Tension Readout and Control Rewind (Magnetic Particle)	X	X							X	X			X	X					X	X		X	X		X					
Digital Tension Readout and Control Unwind (Pneumatic)	X	X										X		X	X				X	X										
Digital Tension Readout and Control Unwind (Motor Drive)	X	X											X	X					X											
Digital Tension Readout and Control Point-to-Point (Motor Drive)	X	X											X	X					X											
Digital Tension Readout and Control Rewind (Motor Drive)	X	X											X	X					X											
<b>Closed Loop Dancer</b>																														
Dancer Control Unwind (Magnetic Particle)	X	X	X	X	X	X	X	X				X										X		X	X	X	X	X		
Dancer Control Rewind (Magnetic Particle)	X	X	X	X	X	X	X	X				X										X	X		X	X	X	X		
Dancer Control Unwind (Pneumatic)	X	X	X	X	X							X	X									X								
Dancer Control Unwind (Motor Drive)	X	X	X	X	X							X																		
Dancer Control Rewind (Motor Drive)	X	X	X	X	X							X																		

# MAGPOWR®

222 West Memorial Road  
Oklahoma City, OK 73114  
1 (800) MAGPOWR  
Phone: (405) 755-1600  
Fax: (405) 755-8425  
E-mail: magpowr@magpowr.com  
Web: www.magpowr.com



MAXCESS INTERNATIONAL COMPANIES

EUROPE (49) 6195.7002.0  
ASIA (65) 834.1998  
www.maxcessintl.com



GUIDING · INSPECTION

1.800.639.3433  
405.755.1600  
www.fife.com

**MAGPOWR®**

TENSION CONTROL

1.800.MAGPOWR  
405.755.1600  
www.magpowr.com



SLITTING · WINDING

1.800.426.1000  
360.834.2345  
www.tidland.com