

Clutch and Brake Solutions

Electromagnetic Friction and Wrap Spring

Electromagnetic Friction and The Genuine Wrap Spring™

Building Our Business On a Strong Foundation

Thomson has a long history of manufacturing quality brakes and clutches. At our roots are strong brand names such as Deltran, API (American Precision Industries) and Warner PSI, coming to you now as Deltran. We have more than 100 years of combined manufacturing experience and a proven ability to provide these core values:

Quality

Deltran products are made in our modern Amherst, NY, factory, which is ISO9001:2008 certified for its design, manufacturing and assembly of clutches and brakes.



Delivery

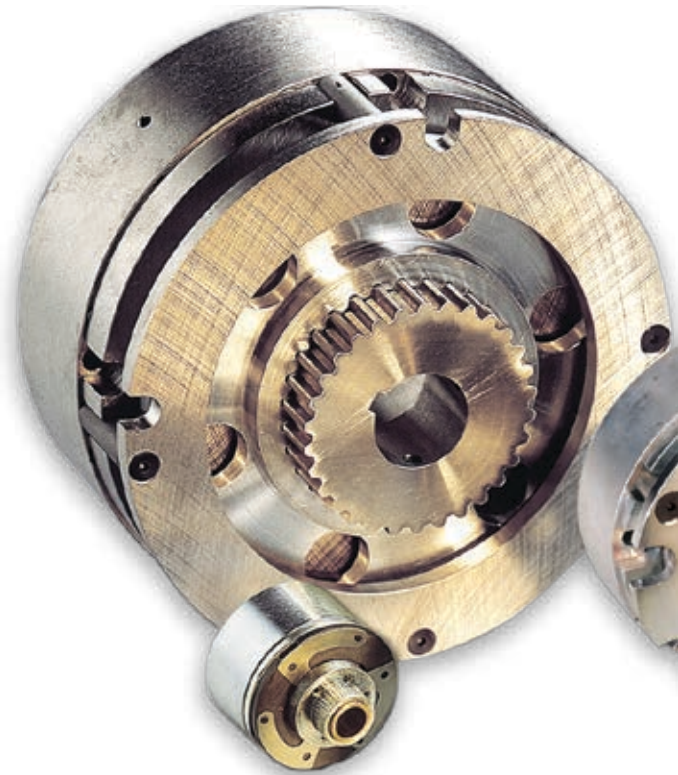
Our clutches and brakes are delivered on time, every time. With more than 800 models available in stock for immediate delivery, Deltran is without peer in customer satisfaction.

Cost

Kaizen is our way of life. These are not just words for promotional literature. Continuous improvement is a daily practice for Deltran. Through our Fortive Business System (FBS) manufacturing methodology, we take lean manufacturing to the next level. We supply our customers with benchmark pricing worldwide by combining FBS, our international supply base and vast investments in tooling and equipment.

Innovation

Deltran has a wide variety of standard clutches and brakes that can be utilized in many applications. We also pride ourselves on ground up designs where we work with you, one engineer to another, to provide a complete custom solution for your unique application. Ask us about our highly engineered solutions from small-volume aerospace and defense to high-volume automotive applications – all at a competitive cost.



Selecting Clutches and Brakes

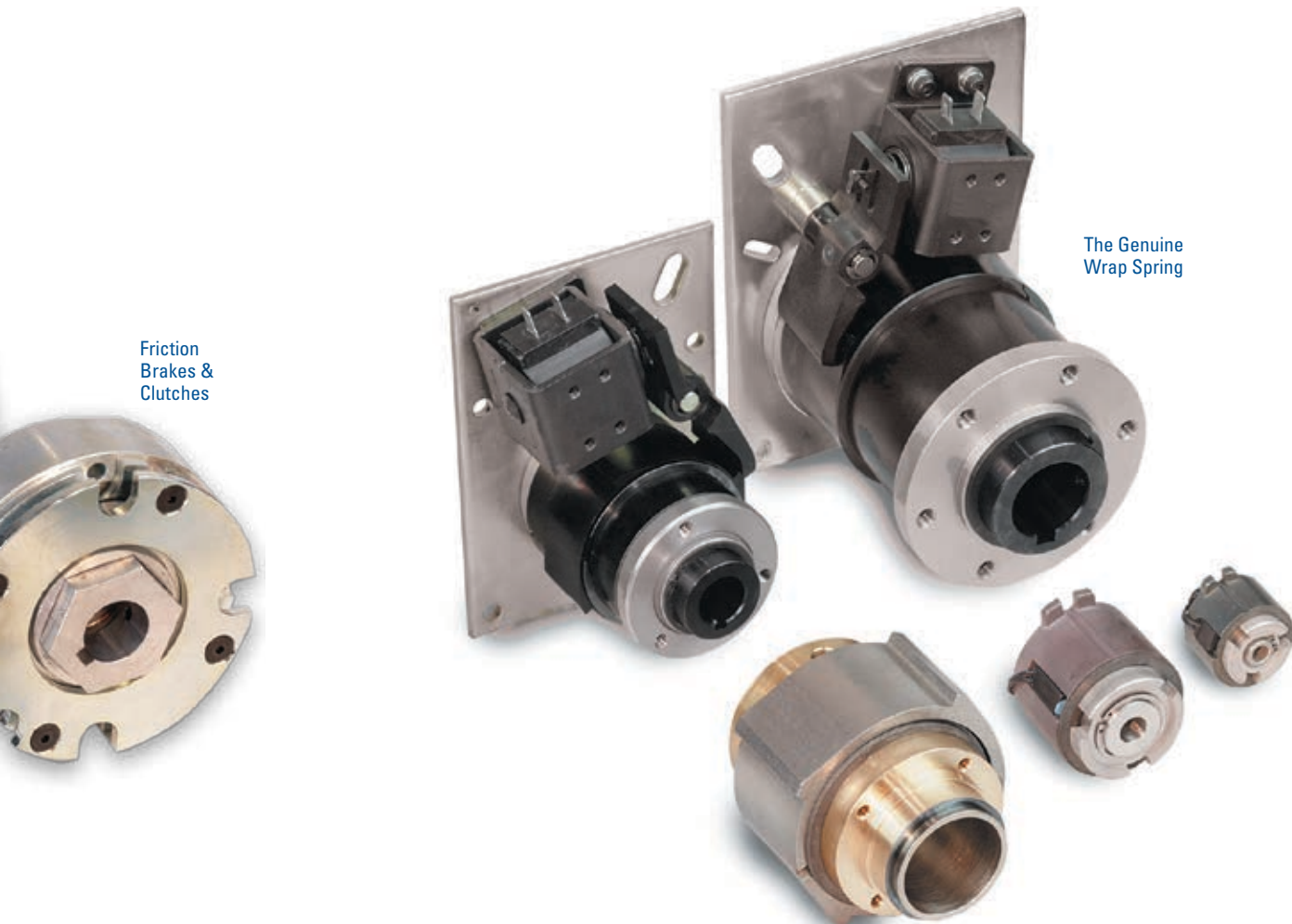
Finding just the right clutch or brake product can be a daunting task. The selection process hinges on the application with many variables to take into consideration.

Clutch and Brake Technologies

We offer wrap spring and electromagnetic friction clutches and brakes. See our full catalog for product specifications and operation, design and application examples, and engineering guidelines.

Selection by Motion Type

The Selection Chart by Motion Type on page 6 identifies our standard products by the basic motions of START, INDEX, SLIP, STOP and HOLD. Each of these motion types are noted by an icon on the left side of this chart. If you know that your application requires a specific motion, this chart may be a helpful place to start your clutch and brake selection.



Friction
Brakes &
Clutches

The Genuine
Wrap Spring

Wrap Spring Clutch/Brakes – Applications and Markets



Medical



Our brakes are used in medical equipment as holding brakes to consistently hold a load in position at a specific stopping point. Our clutches are used to drive belts and cables for patient lifts and other medical applications.

- Patient tables and lifts
- Patient beds
- Mammography equipment
- Pill dispensing machines
- Nuclear imaging (C.A.T. scan)
- Digital Imaging
- X-ray machinery applications.

Semiconductor and Electronic Assembly



Our clutch/brake technology ensures high reliability and quality while being cost effective in semiconductor applications.

- Wafer-handling robots
- Inspection test systems
- Pick-and-place machines

- Automated die bonding equipment
- Product handling storage elevator
- Surface mount technology (SMT)

Material Handling/Packaging



Long life and reliability are key attributes for clutches and brakes used in material handling and packaging applications.

- Conveyor systems
- Baggage handling conveyors
- Pick-and-place machines

- Strapping machines
- Food labelling systems
- Food dispensing
- Egg packing equipment
- Crimping machines

Aerospace and Defense



Wrap spring and friction units are used in commercial and military aircraft vehicles and equipment.

- Autopilot systems
- Satellites
- Fuel control
- Tank gun turret

- Helicopter actuators
- Onboard instrumentation
- Valves
- Air cabin control backup systems
- Missiles/precision guided munition

Friction Brakes & Clutches – Applications and Markets



Automotive



Cars, vans and SUV utilize wrap spring clutches, custom power-off brakes and power-on tooth clutches in many applications.

- Cinch/latch mechanisms for doors and trunks
- Actuators

- Cruise control
- Power liftgate
- Transaxles
- Power sliding doors

Electric Vehicle Systems



Friction brakes are utilized in many battery-powered vehicle applications, including lift trucks, golf cars and sweeping machines.

- Scissor lifts
- Electric hoists and cranes
- Steering applications

- Lift trucks
- By wire applications
- Electric sweeping machines

Office Automation



Wrap spring and friction clutches and brakes are widely used in office equipment.

- Copiers
- Label dispensing
- Staplers
- Paper punching

- Folding machines
- Printers
- Wire stitchers

Agricultural







Wrap spring and friction clutches and brakes are used in agricultural equipment.

- Seeders
- Balers
- Tractors
- Ride-on lawnmowers

- Harvesters
- Electric vehicle systems equipment

Clutches & Brakes Selection Chart

Selection Chart by Motion Type					
Motion	Type	Models/Sizes	Max Torque lb-in (Nm)	Max RPM	Actuation Method
Starting	Wrap Spring Clutch	DL-30, 33	30 (3.4)	1200	DC
	Wrap Spring Clutch	MAC-30, 45, 45	150 (16)	1200	DC
	Friction Clutch	CS-11, 15, 17, 22, 26	80 (9.04)	5000	DC
	Friction Clutch	CSC-11, 15, 17, 22, 26	80 (9.04)	5000	DC
	Tooth Clutch	TC-19, TCR-19	250 (28.2)	5000	DC
Indexing	Wrap Spring Clutch	PSI-2, 4, 5, 6, 8	2500 (282.5)	1800	Mechanical
	Wrap Spring Clutch	SAC-2, 4, 5, 6	500 (56.5)	1800	AC, DC Solenoid or AIR
	Wrap Spring Clutch/Brake	Super CB-5, 6, 7, 8, 10	5,000 (565)	750	AC, DC Solenoid or AIR
	Wrap Spring Clutch/Brake	Standard CB-2, 4, 5, 6, 7, 8, 10	5,000 (565)	1800	AC, DC Solenoid or AIR
	Wrap Spring Clutch	ACCE-7	1500 (169.5)	400	AC, DC Solenoid or AIR
	Wrap Spring Clutch	ACCE-7 Heavy Duty	2500 (282.5)	400	AC, DC Solenoid or AIR
	Wrap Spring Clutch	ACCM-7	1500 (169.5)	400	Mechanical
	Wrap Spring Clutch	ACCM-7 Heavy Duty	2500 (282.5)	400	Mechanical
	Wrap Spring Clutch	SP-2, 4, 5, 6	500 (56.5)	1500	AC, DC or AIR
Stopping	Power on Brake	BF-11, 15, 17, 22, 26	125 (14.13)	5000	DC
	Power on Brake (metric)	MBF-26, 30, 40, 50, 60, 80, 100 (L & S)	3540 (400)	5000	DC
Holding	Bi-Directional No Back Clutch Brake	BDNB	250 (28.23)	200	Mechanical
	Power on Clutch (metric)	MCS-26, 30, 40, 50, 60, 80, 100	3100 (350)	3600	DC
	Friction Brake	SB-15, 17, 19, 23, 26, 28, 30, 40, 50, 60, 70	1200 (135.6)	5000	DC
	Friction Brake	FSB-15, 17	3 (0.34)	5000	DC
	Permanent Magnet Brake	RAB-13, 15, 20, 25, 32, 40, 50	470 (53)	5000	DC
	Friction Brake	PMB-30, 40, 50, 60, 65, 75, 85	1500 (170)	3000	DC
	Friction Brake	MBF-26, 30, 40, 50, 60, 80, 100 (L & S)	3540 (400)	5000	DC
	Power off Brake	MBPR-15 – MBRP-30	35 (4)	5000	DC
	Multiple Disc Brake	Engineered Products: Reverse Acting Tooth Clutch, Power off Spring Set Tooth Brakes, Multiple Disc Clutch Brake, High Volume/Low Cost Power off Spring Set brakes, Torque Feedback Device, Mechanical slip devices, Complete Custom Assemblies and Sub-assemblies.			

Online Resources

Thomson offers a wide variety of online application, selection, and training tools to help you in the selection process. An experienced team of application engineers is also available to help size and select clutches and brakes models to best fit your application needs. To explore additional technical resources and options, go to www.thomsonlinear.com/cb or contact Thomson customer support at 540-633-3549.

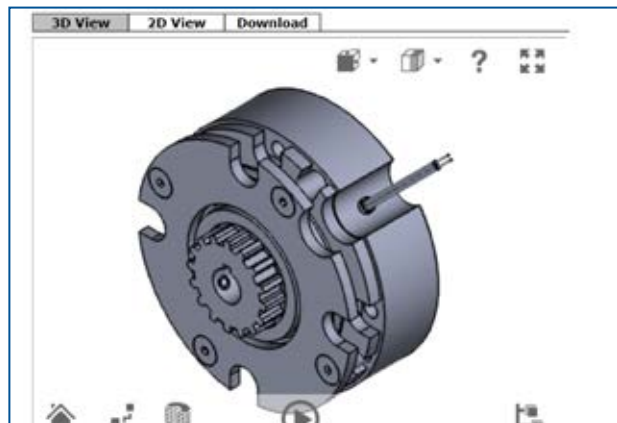
Clutches & Brakes Website

Get additional information and learn more on our website: <http://www.thomsonlinear.com/cb>



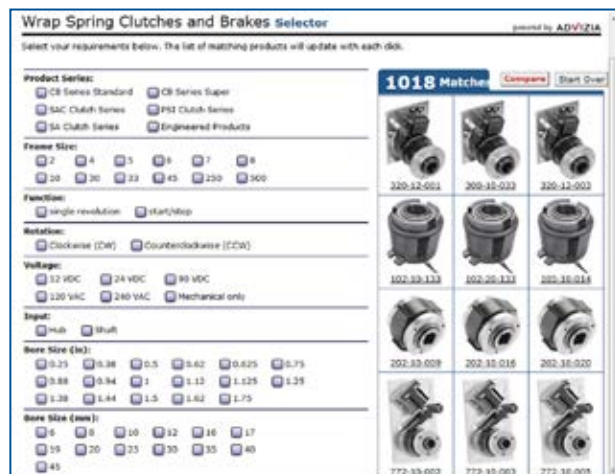
2D/3D CAD Model Download

Download for free: http://www.thomsonlinear.com/website/com/eng/products/clutches_and_brakes/friction_clutches_and_brakes_drawings.php

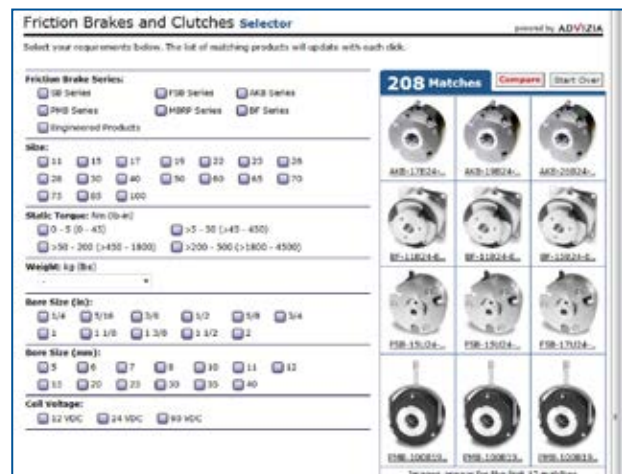


Product Selectors

Wrap Spring Clutches & Brakes Selector: http://www.thomsonlinear.com/website/com/eng/products/clutches_and_brakes/wrap_spring_clutches_selector.php



Friction Clutches & Brakes Selector: http://www.thomsonlinear.com/website/com/eng/products/clutches_and_brakes/friction_clutches_and_brakes_selector.php



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