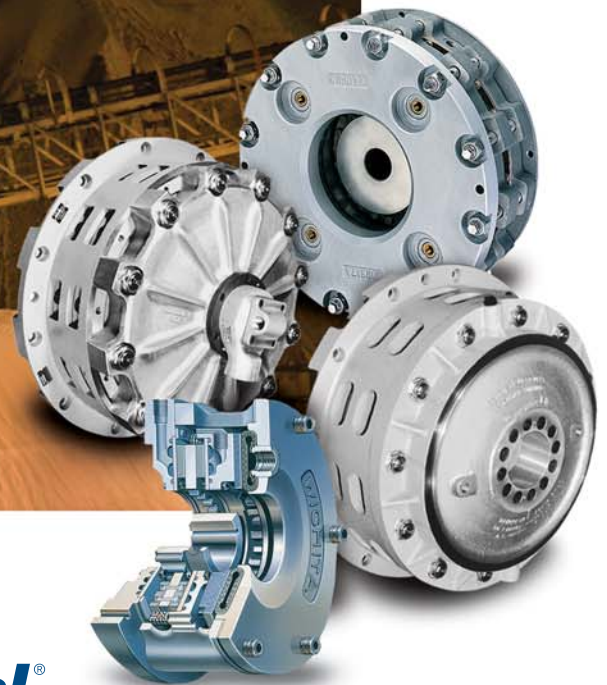


Pneumatic Clutches and Brakes



 **Wichita**[®]
Clutch

 **Industrial**[®]
Clutch

*Setting
industry
standards
for over
50 years*

**Dependable Torque
Control Products**

Wichita and Industrial clutches and brakes provide the high speed acceleration and deceleration that are essential in modern process equipment. They are available in a variety of designs and mounting configurations and are used extensively around the world by leading OEMs in metalworking, steel, marine, pulp/paper, material handling, paper converting, mining and energy.

Engineering

We maintain a staff of highly trained technical personnel, including registered engineers, to design, manufacture, and apply our heavy duty clutches and brakes. Our application engineers are dedicated to providing fast response to your inquires, and the most cost effective power transmission solution we can provide. Our design engineers use the latest in design technologies to provide innovative and cost effective clutch and brake solutions to your most demanding applications. The result is continual product development such as the high performance clutches and brakes shown above.

Global Quality

For over 50 years Wichita Clutch and Industrial Clutch have provided engineered solutions to the most demanding torque control problems for a combined 130 years. Today, we are recognized as global leaders in heavy-duty power transmission.

Quality assurance is provided through involvement programs that empower all levels of personnel to maintain product standards based on customer requirements. These standards are documented and provided by the engineering design parameters on component and assembly prints.

The Quality Assurance Department provides essential product and process audits to ensure vendor and manufacturing process capability. Through a team based, closed loop evaluation and improvement process, we strive to guarantee our conformance to product specifications that provide our customers with optimum product performance.



Low Inertia and Air Tube Disc Clutches and Brakes

Air actuated, modular clutch and brake combinations

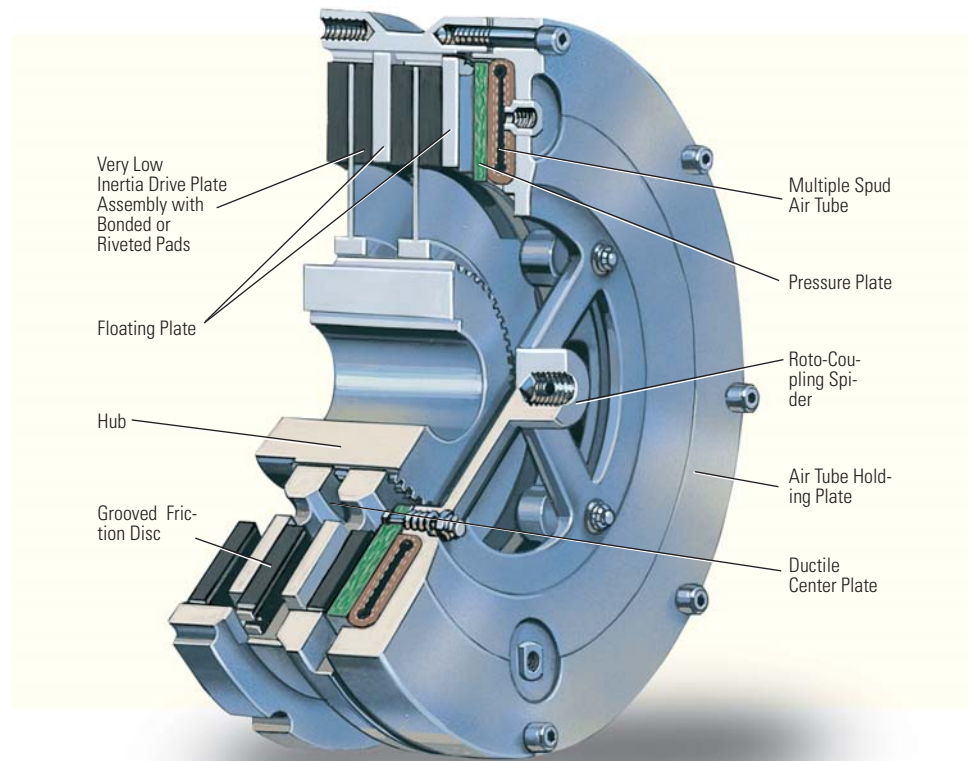
Air Tube design provides fast response with smooth engagement

Clutch Combinations

- Low Inertia
- Low Inertia High Torque

Brake Combinations

- Low Inertia
- Low Inertia Spring-Set



Low Inertia Clutches and Brakes

Wichita Low Inertia Clutches and Brakes are designed to be completely free from effects of centrifugal force and self energization. They provide the high speed acceleration and deceleration essential for today's process equipment. The low-inertia designs reduce power consumption and heat build-up in cycling applications. A quick energizing air tube provides fast response with smooth engagement. They combine all the best features of the disc type clutch with all the advantages of direct air engagement through direct axial pressure application in a special composition full-circle tube.

Wichita clutches engage smoothly without noise, shock or impact and release completely in a fraction of a second. Extremely fast action is possible because of the small volume of air required. Torque developed is in direct proportion to air pressure applied.

Clutches may be slipped moderately to control the acceleration rate. When large inertia loads are powered from electric motors, smooth, controlled slip starts by Wichita Clutches can keep power de-

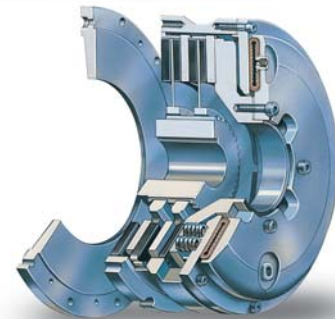
mands below the allowed maximum. Heat generated by controlled slipping or high cycle rate operation is dissipated by the centrifugal blower design of these units.

These clutches and brakes interface well with automated controls through simple air and/or electric circuits.



High Torque Clutch

Wichita High Torque Clutches provide the highest torque to size ratios of any Wichita clutch. They provide smooth controlled starts and stops and are designed for minimum power loss due to low rotating inertia.



Spring-Set Brake

Wichita Spring-Set Air Release Brakes are ideal for fail safe protection of process equipment. Constructed of high strength cast iron, this improved design has thick friction discs for longer wear life. The fast acting air tube design assures quick, smooth stops.

Common Features for High Torque Clutch and Spring-Set Brake

- Thick, full circle friction discs for longer life
- Extremely fast response
- No lubrication
- High torque to size ratio
- Low rotating inertia

Combination Clutch/Brakes

Air Actuated Clutch and Spring-Set Brake



CCB Series Clutch/Brakes

High torque with fast cycle rate

The Wichita Combination Clutch/Brake provides fast, smooth cycling for stamping presses and metal forming equipment by combining a high performance clutch and spring-set brake in a compact, pancake assembly that prevents overlap. The extra fins and cooling slots allow for excellent heat dissipation. A low stress spline eliminates driving pins between the shaft and centerplate, while the precision die springs provide consistent long-life braking action.

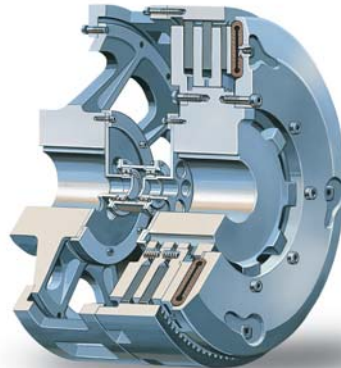
The heavy duty size models feature an air tube disc for direct air engagement. Optional quick air-release valves provide faster cycling than piston and cylinder models. There are no o-rings or piston seals to wear-out and leak and no lubrication or adjustment is necessary. Worn friction plates can be relined at Wichita's factory on an exchange basis.

Installation of the CCB is also easy. The simple air system has external connections and requires no shaft seals.

- No shaft seals for faster, lower cost installation
- Optional shrink disc mounting for simplified, easier installation
- Fast, smooth cycling
- Cool running with higher torque

Standard Vent Clutches

Clutch Coupling Action



Ball Mill Clutches

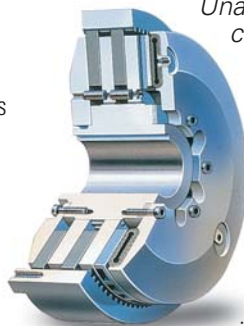
Ideal for jogging and inching applications

Wichita Ball Mill Clutches are specially designed to provide quick, smooth starts with limited current surge for heavy duty grinding mills. The clutch is adaptable to remote control allowing centralized operation through simple air or electric circuits.

- Heavy duty applications
- Quick, smooth starting
- High heat dissipation for jogging and inching

Coupling Clutches

Unaffected by centrifugal forces



The Wichita Standard Vent Combination Clutch-Coupling is designed for reliable in-line power transmission. The simple air tube design, with small air volume, speeds engagement and disengagement. It is unaffected by centrifugal force and has no self-energization like drum clutch designs. Ideally suited for large inertia loads where smooth controlled starts are needed.

- In-line power applications
- Smooth, controlled acceleration

Industrial Clutches & Brakes

Piston Actuated Clutches and Spring-Set Brakes



LK Series Clutches

Dry, disc-type application

The model LK is a low driven inertia air set clutch. It is the ideal choice for end of shaft mounting arrangements.

- High cycle frequency
- Highest torque capacity per envelope size
- Quick response with minimal air consumption

LKB Series Brakes

Dry, disc-type application



The model LKB is a spring set air or hydraulic released brake. The LKB offers a wide range of torque capacities and release pressures while maximizing ventilation for dissipation of large thermal loads.

- Long lining life
- Stable friction coefficients
- Lower maintenance costs
- Low inertia contribution to system

Motor Brakes

FailSafe Protection— Spring-Set Action



Motor Brakes

Quick, smooth stopping

Wichita Spring-Set Air Release Motor Brakes are ideal for failsafe protection of process equipment. Available in foot mounted and C-face options, this improved design has thicker friction discs for longer wear life. The fast acting Spring-Set actuation assures quick, smooth stops.

C-Face Compatible

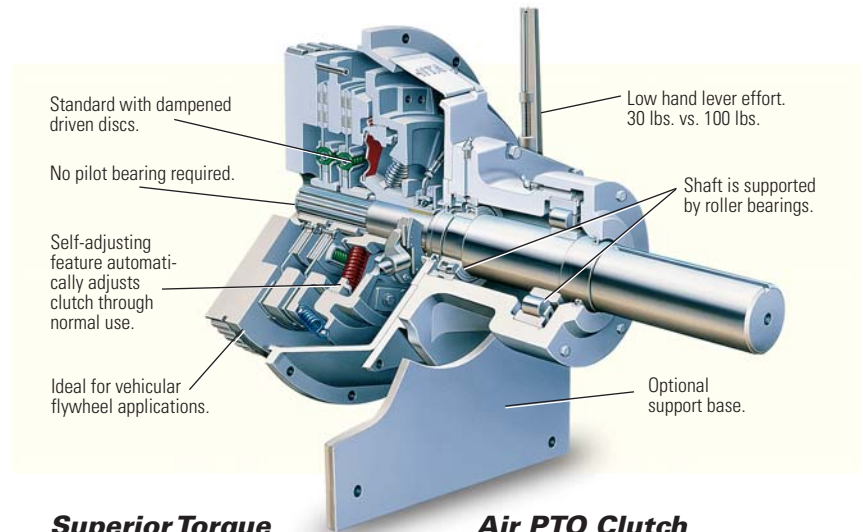
Wichita C-Face Motor Brakes are ideal when paired with any appropriate size motor.

C-face adaptors are available in standard NEMA T and U frame designs. Custom adaptors are available for your specific motor design.

- Failsafe protection
- Long wear life
- Quick, smooth stopping
- No adjustment
- No lubrication
- Low inertia design
- Rugged, dependable design

PTO's

Side Load and In-Line Models



Superior Torque Control for Heavy Duty Diesel Engines

Mechanical Side Load PTO

Two mechanically actuated PTO's are now available in addition to the performance-proven Wichita Air Tube PTO's. Complete clutch engagement of the mechanical PTO units is assured with each release of the hand lever due to the incorporation of a heavy-duty truck clutch. With its many outstanding features, the clutch used in the Wichita PTO prevents torsional vibration from damaging engine or transmission components, or causing spline wear. The result is superior Power Take-Off performance and durability!

Mechanical PTO Features

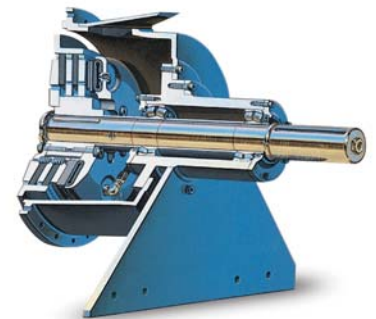
In-Line PTO design provides direct drive operation with side load capability.

Side Load PTO utilizes a pair of heavy-duty roller bearings fitted into the shaft housing to eliminate the transmission of side loads to the crankshaft.

- No pilot bearing
- Standard with dampened driven discs
- Self-adjusting feature automatically adjusts clutch through normal use
- Ideal for vehicular flywheel applications and adaptable to industrial flywheel applications.
- Low hand lever effort. 30 lbs. vs. 100 lbs. for over-center type PTO. Lever can be mounted on either side.

Air PTO Clutch

Air Tube Disc Side Load PTO

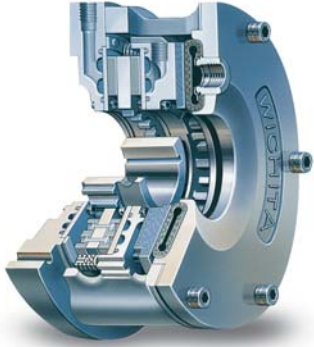


Air Tube Disc design provides dependable, trouble-free performance on indirect drives with large overhung loads on engines of 250–1000 HP. The simple air controls can be utilized to remotely control the clutch as well as the throttle.

- Disc design provides smooth, shock free start-ups.
- High speed air tube not affected by centrifugal force.
- No O-rings or diaphragms to wear out.
- Dynamically balanced for high speed operation.
- Remote control operation.

Tension Brakes High Heat Capacity

High Heat Dissipation



Kopper Kool Brakes

Superb Heat Transfer

Wichita Kopper Kool clutches and brakes represent the ultimate design for very high heat dissipation in the most rugged tensioning applications. Torque levels are in direct proportion to air pressure, providing accurately controlled, continuous slip braking action.

- New HICO friction material provides higher torque
- Copper alloy wear plates increase heat transfer
- Very high thermal capacity

Steel Water Cooled Brakes

Cool Running



Wichita Steel Water Cooled Brakes provide high heat dissipation in a cost-effective design. The proven air tube actuation allows precise web tension with simple air controls.

- Simple, cost-effective design
- One-piece steel water jacket eliminates leakage
- High thermal capacity

Tension Brakes Air Cooled

Supurb web tension system control



Mistral Brakes

Ideal for corrugating and paper converting applications

Wichita Clutch's Mistral pneumatic brakes feature a modular design which allows for variable tensioning capacities. Each brake can be specified with a varying number of pneumatic actuators, allowing precise selection of brake torque capacity for optimum tension control. This high performance, versatile brake is capable of handling the tensioning requirements of the latest equipment designs while increasing line speeds to 1,140 ft./min.

Mistral brakes are extremely compact at only 11.6" or 16.1" diameter. Their size facilitates the pickup of small, part reels used in short batch runs. For automated reel loading machines, Mistral offers optional infrared and speed sensor installation within the brake.

- Long life in constant use applications
- Torque range exceeding 15,900 in. lbs.
- Heat dissipation capacity up to 7 Thermal HP



ModEvo Brakes

Optimized air-cooled performance

ModEvo air applied tension brakes provide smooth control while saving money and time.

The ModEvo brake disc was developed utilizing Finite Element Analysis techniques to ensure maximum strength with minimum weight. The discs are designed to make the best use of cooling air available at slow speeds and being bi-directional; it achieves high heat dissipation capacity in either rotational direction. An optional cooling fan is available where space is limited or more extreme heat handling is required.

Each disc can be specified with a minimum single module, up to the maximum number of modules that can be fitted around the disc. This flexibility allows for a wide range of torque-handling capacities.

- Discs available in five sizes: 250mm, 300mm, 350mm, 400mm, 450mm diameters
- All discs are the same thickness and use the same brake modules and actuators
- Torque capacity from 659 lb.ft. for a 250mm disc to 3,181 lb.ft. for a 450mm disc

Longer Life

We have years of experience in building value into every Genuine Wichita and Industrial Replacement Part. Our parts, made with quality materials and leading-edge technology, not only last longer than the competition, resulting in lower life cycle costs, they also fit precisely to give you the assurance of trouble-free performance. That's why we can confidently offer you the very best warranty in the business.

Faster Delivery

To help you lessen downtime problems, we've recently established new methods and procedures that will get Genuine Replacement Parts to you quicker than ever before. We've improved order processing, increased manufacturing capacities and added to our nationwide network of distributors. Many of our parts can now be shipped within 24 hours of your order or are available off-the-shelf from your local distributor and you don't have to pay a premium price for all the product and service advantages of

Warranty

When you specify Genuine Replacement Parts from Wichita and Industrial you automatically expect more...and get more. Especially better performance, longer life and the peace of mind that comes with knowing you are working with the industry's proven leader. To further back up our quality commitment to you, we now offer a new three-year warranty on our line of replacement air tubes*, and a two-year warranty on all other components**. That's unmatched by anyone in our industry...and for good reason.

Air Tubes

- Wear resistance polymers insure compatibility with other Wichita parts
- Consistent size allows ease of replacement if required
- Low air volume construction reduces needless use of compressed air
- Combination of space-age fibers and elastomers give extended life and retention of size and fit.



Friction Discs

- Special high strength materials with molded composite teeth resist functional wear and provide additional output torque
- Exactly match the mating Wichita component for consistent and maximum high torque output
- High heat resistance to combat unforeseen application problems
- Consistent size for ease of replacement
- Air grooves provide cooling and longer life



Genuine Wichita and Industrial Replacement Parts. You'll find our prices to be very competitive with any of the companies offering imitation replacement parts.

* Split air tubes are not intended for permanent installation and, therefore, are not covered under the warranty agreement.

**The warranty does not cover replacement or refurbishment of normal wear items.



For after hours emergency service, call 1-940-631-4595.

Altra Industrial Motion

All Customer Service phone numbers shown in bold

Electromagnetic Clutches and Brakes

Warner Electric

Electromagnetic Clutches and Brakes

New Hartford, CT - USA
1-800-825-6544

For application assistance:
1-800-825-9050

St Barthelemy d'Anjou, France
+33 (0) 2 41 21 24 24

Precision Electric Coils and Electromagnetic Clutches and Brakes

Columbia City, IN - USA
1-260-244-6183

Matrix International

Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes

Brechin, Scotland
+44 (0) 1356 602000

New Hartford, CT - USA
1-800-825-6544

Inertia Dynamics

Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes

New Hartford, CT - USA
1-800-800-6445

Overrunning Clutches

Formsprag Clutch

Overrunning Clutches and Holdbacks

Warren, MI - USA
1-800-348-0881 – Press #1

For application assistance:
1-800-348-0881 – Press #2

Marland Clutch

Roller Ramp and Sprag Type Overrunning Clutches and Backstops

Burr Ridge, IL - USA
1-800-216-3515

Stieber Clutch

Overrunning Clutches and Holdbacks

Heidelberg, Germany
+49 (0) 6221 30 47 0

Engineered Couplings

Ameridrives Couplings

Mill Spindles, Ameriflex, Ameridisc

Erie, PA - USA
1-814-480-5000

Gear Couplings

San Marcos, TX - USA
1-800-458-0887

Bibby Transmissions

Disc, Gear, Grid Couplings, Overload Clutches

Dewsbury, England
+44 (0) 1924 460801

Boksburg, South Africa
+27 11 918 4270

TB Wood's

Elastomeric Couplings

Chambersburg, PA - USA
1-888-829-6637 – Press #5

For application assistance:
1-888-829-6637 – Press #7

General Purpose

Disc Couplings

San Marcos, TX - USA
1-888-449-9439

Ameridrives Power Transmission

Universal Joints, Drive Shafts, Mill Gear Couplings

Green Bay, WI - USA
1-920-593-2444

Huco Dynatork

Precision Couplings and Air Motors

Hertford, England
+44 (0) 1992 501900

Charlotte, NC - USA
1-800-825-6544

Linear Products

Warner Linear

Linear Actuators

Belvidere, IL - USA
1-800-825-6544

For application assistance:
1-800-825-9050

St Barthelemy d'Anjou, France
+33 (0) 2 41 21 24 24

Heavy Duty Clutches and Brakes

Wichita Clutch

Pneumatic Clutches and Brakes

Wichita Falls, TX - USA
1-800-964-3262

Bedford, England
+44 (0) 1234 350311

Twiflex Limited

Caliper Brakes and Thrusters

Twickenham, England
+44 (0) 20 8894 1161

Industrial Clutch

Pneumatic and Oil Immersed Clutches and Brakes

Waukesha, WI - USA
1-262-547-3357

Gearing

Boston Gear

Enclosed and Open Gearing, Electrical and Mechanical P.T. Components

Charlotte, NC - USA
1-800-825-6544

For application assistance:
1-800-816-5608

Nuttall Gear and Delroyd Worm Gear

Worm Gear and Helical Speed Reducers

Niagara Falls, NY - USA
1-716-298-4100

Belted Drives and Sheaves

TB Wood's

Belted Drives

Chambersburg, PA - USA
1-888-829-6637 – Press #5

For application assistance:
1-888-829-6637 – Press #7

Engineered Bearing Assemblies

Kilian Manufacturing

Engineered Bearing Assemblies

Syracuse, NY - USA
1-315-432-0700

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www.warnerelectric.com.sg

Thailand

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Suanluang Bangkok 10250
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Fax: 940-723-3436



www.indclutch.com

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