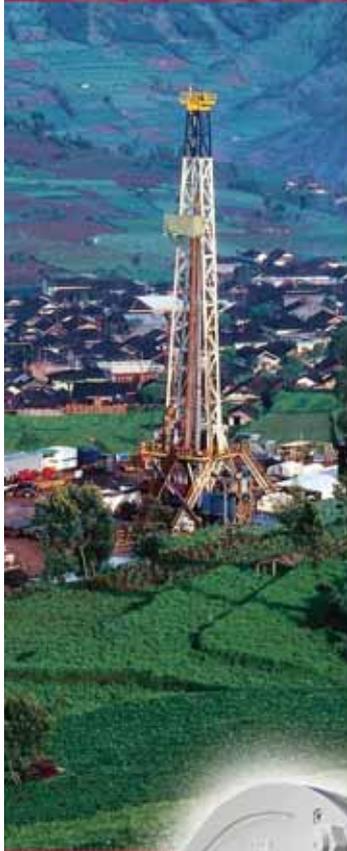


ENGINEERED PRODUCTS
WICHITA CLUTCH



AquaMaKKs™
Water Cooled
Clutches
and Brakes

 **Wichita**
Clutch

AquaMaKKs Water Cooled Clutches and Brakes

The newest addition to Wichita Clutch's family of water cooled airtube clutches and brakes

AquaMaKKs™ clutches and brakes are pneumatically or hydraulically controlled and water cooled. They consist of a series of alternating friction discs and water jackets. Torque is transmitted by applying axial force from the pneumatic, hydraulic, or spring set actuator. Copper wear plates are used for excellent heat dissipation. AquaMaKKs provides accurate torque control for constant tensioning and are perfectly suited for applications in oil and gas, metal processing and forming, forestry, and marine deck machinery.

Design Benefits

- Simplicity of design with fewer parts simplifies installation and maintainability, saving both time and money.
- The standard AquaMaKKs design incorporates premium materials and finishes suitable for marine deck environments. **No optional salt water corrosion protection is required.**
- Shim design makes it easy to maintain and adjust for wear.
- Unique patent pending water jacket design ensures high heat absorption and torque stability, allowing for greater heat dissipation over similar sized competitive units.
- Unique mounting pattern enables direct replacement to Wichita or competitors' units, requiring no design changes for the customer.
- AquaMaKKs is a perfect solution for field retrofits, rebuilds or new OEM applications.



Custom Engineered Solutions with Wichita

With Wichita Clutch, you get more than just a water cooled brake, you can get a turnkey solution. Whether you need a brake painted a preferred color, water connection kits, covers, shaft assemblies, or deck mount assemblies, Wichita will provide a custom engineered solution to meet your specific needs. Call Wichita today for more information.



AquaMaKKs Water Cooled Clutches and Brakes

Air, hydraulic, or spring set actuated and water cooled design, featuring copper wear plates optimized for heavy-duty continuous slip tension applications



Oil and Gas

The AquaMaKKs family is ideally suited for superior water cooled tension control for drawworks applications. It also can be the perfect solution for integration into electronic drilling systems as well as traditional style drawworks control systems.

Features that make AquaMaKKs ideal for oil and gas applications:

- Compatible with major electronic drilling systems
- Airtube design has less hysteresis than piston type actuators, making it ideal for automatic drilling systems
- Engineered Packaged solution including shafts, water kits, covers, and deck mounts
- The unit can be easily removed for service if required and/or quickly swapped out for maximum rig availability and rapid serviceability, reducing expensive downtime



Metal Processing & Metal Forming

AquaMaKKs clutches and brakes can be used to control tension on the coilers in metal processing plants and to control tension in unwind stands and slitters in metal forming facilities.

Features that make AquaMaKKs ideal for metal processing and metal forming applications:

- Compatible with PLC control systems
- Higher thermal capacity than comparable models
- Easy to maintain minimizing downtime
- Open design concept for easy wear inspection
- Safety covers provided for increased operator and plant safety



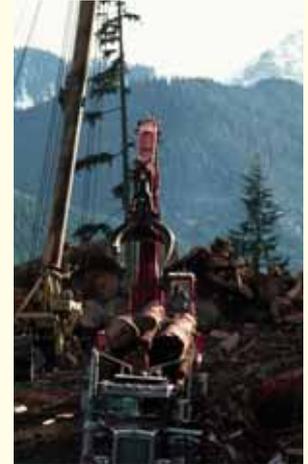
Marine Deck Machinery

Positioning and Mooring Winches require high heat dissipation and accurate tension control. That's why AquaMaKKs is ideal for these applications.

Features that make AquaMaKKs ideal for marine deck applications:

- The standard AquaMaKKs design incorporates premium materials and finishes suitable for marine deck environments.
- Compatible with electronic and analog control systems for tension winches
- Long lasting friction material for improved wear life
- Optional designs available for suitability in low temperature environments
- Accessories and packaged engineered solutions available such as deck mounts, manifold kits, water connection kits, covers, and sensor mounting provisions

No optional salt water corrosion protection is required



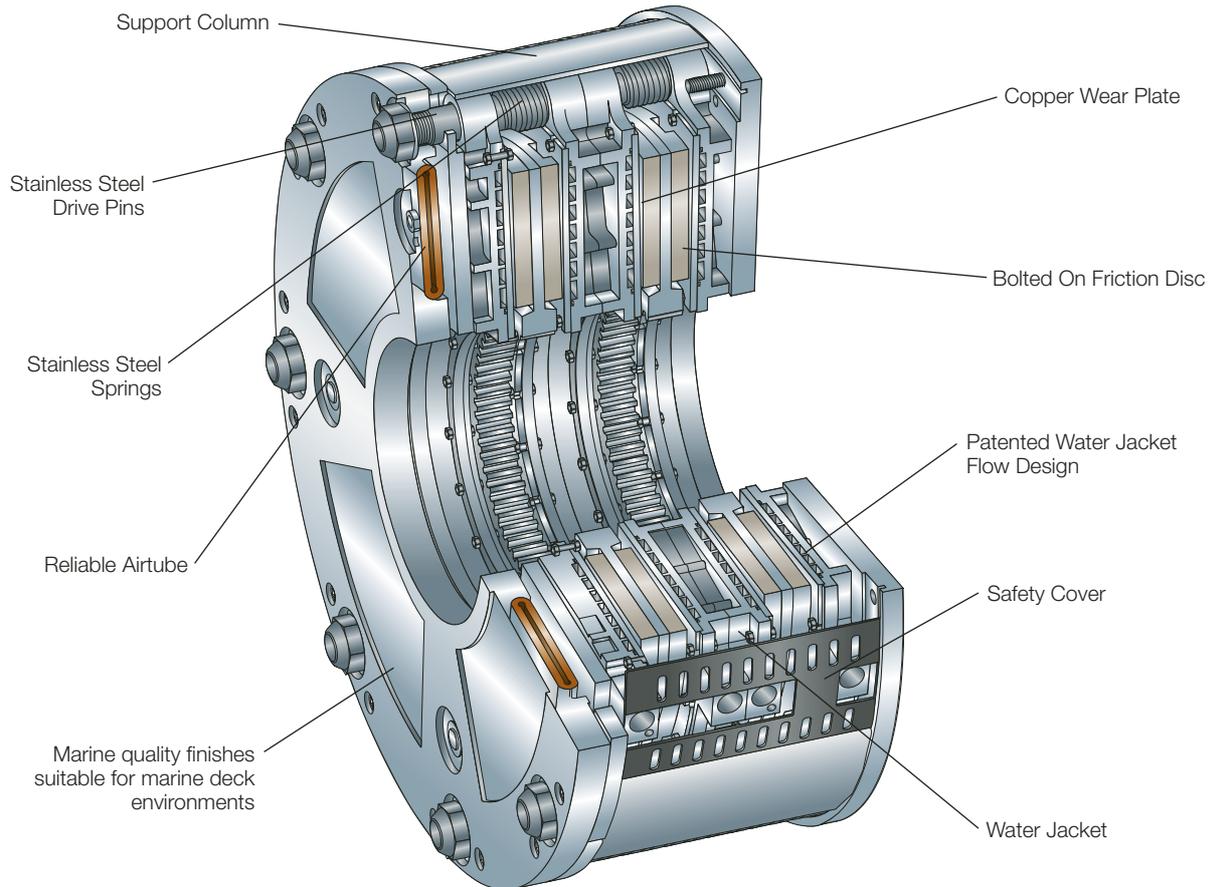
Forestry

AquaMaKKs water cooled brakes provide precise tension control on winch drives for mobile forestry equipment, such as yarders.

Features that make AquaMaKKs ideal for forestry applications:

- Compatible with tension control systems on yarders
- Open case design enables easy wear inspection and serviceability
- Higher thermal capacity than comparable models
- Lighter weight version available for mobile equipment

Features



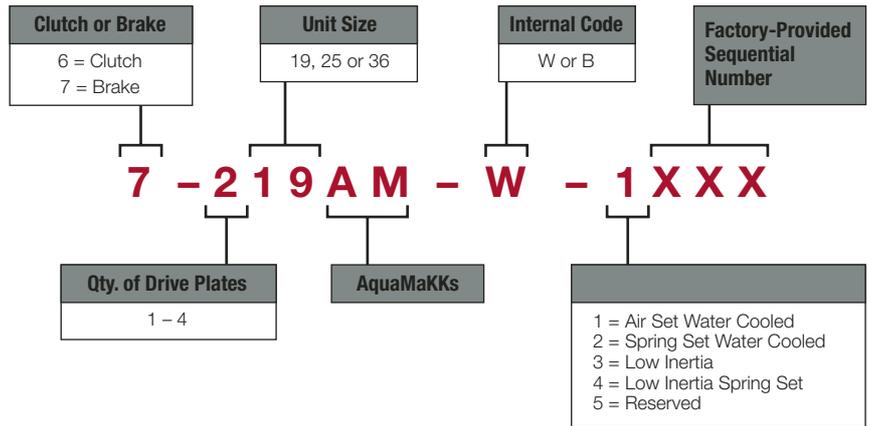
Features

- Durable air tube design with high strength reinforced neoprene air-tubes, offering longer service life.
- Water channels for balanced water flow for the highest thermal capacity.
- Long-lasting friction material with minimal wear on mating copper.
- Copper alloy wear plates enable higher heat transfer than any other metals.
- Hub spline provides perfect alignment of rotating discs.
- External air & water connections.
- Release springs ensure complete disengagement.
- Adjustment for wear is easily accomplished by removing shims without any unit disassembly.
- Unique torque pin column arrangement provides structural integrity of case.
- Open case design with covers for safe, simple, visual inspection and easy maintenance.
- The standard AquaMaKKs design incorporates premium materials and finishes suitable for marine deck environments. **No optional salt water corrosion protection is required.**

Options

- Standard and HICO friction materials available.
- Optional HICO friction material provides up to 50% higher torque.
- Provisions for electronic wear monitoring.
- Customer specific back-plate mounting configurations.
- Custom engineered solutions available for adding accessories such as deck mount assemblies, water kits, shaft assemblies, etc.
- Materials available for operation in low temperature environments.
- Hydraulic piston actuation available.
- Spring Set version with either air or hydraulic release available.

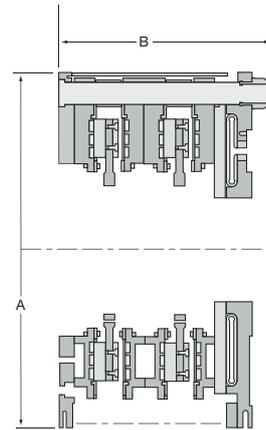
Ordering Number System



Dimensions & Specifications

Dimensions

Model Size ATD-	Assembly Number	(A) Diameter		(B) Width	
		in.	(mm)	in.	(mm)
KKB119AM	7-119AM-W-1000	28.28	718	12.35	317
KKB219AM	7-219AM-W-1000	28.28	718	18.00	457
KKB319AM	7-319AM-W-1000	28.28	718	23.65	601
KKB225AM	7-225AM-W-1000	34.12	867	20.16	512
KKB325AM	7-325AM-W-1000	34.12	867	40.18	1037
KKB136AM	7-136AM-W-1000	45.50	1155	11.70	297
KKB236AM	7-236AM-W-1000	45.50	1155	18.80	478
KKB336AM	7-336AM-W-1000	45.50	1155	25.90	658
KKB436AM	7-436AM-W-1000	45.50	1155	33.06	840

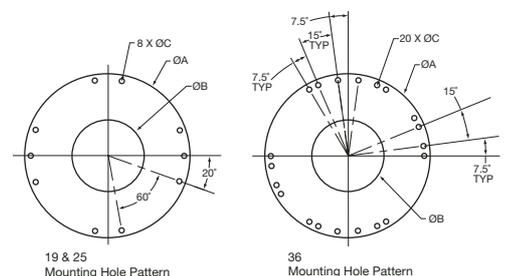


Specifications

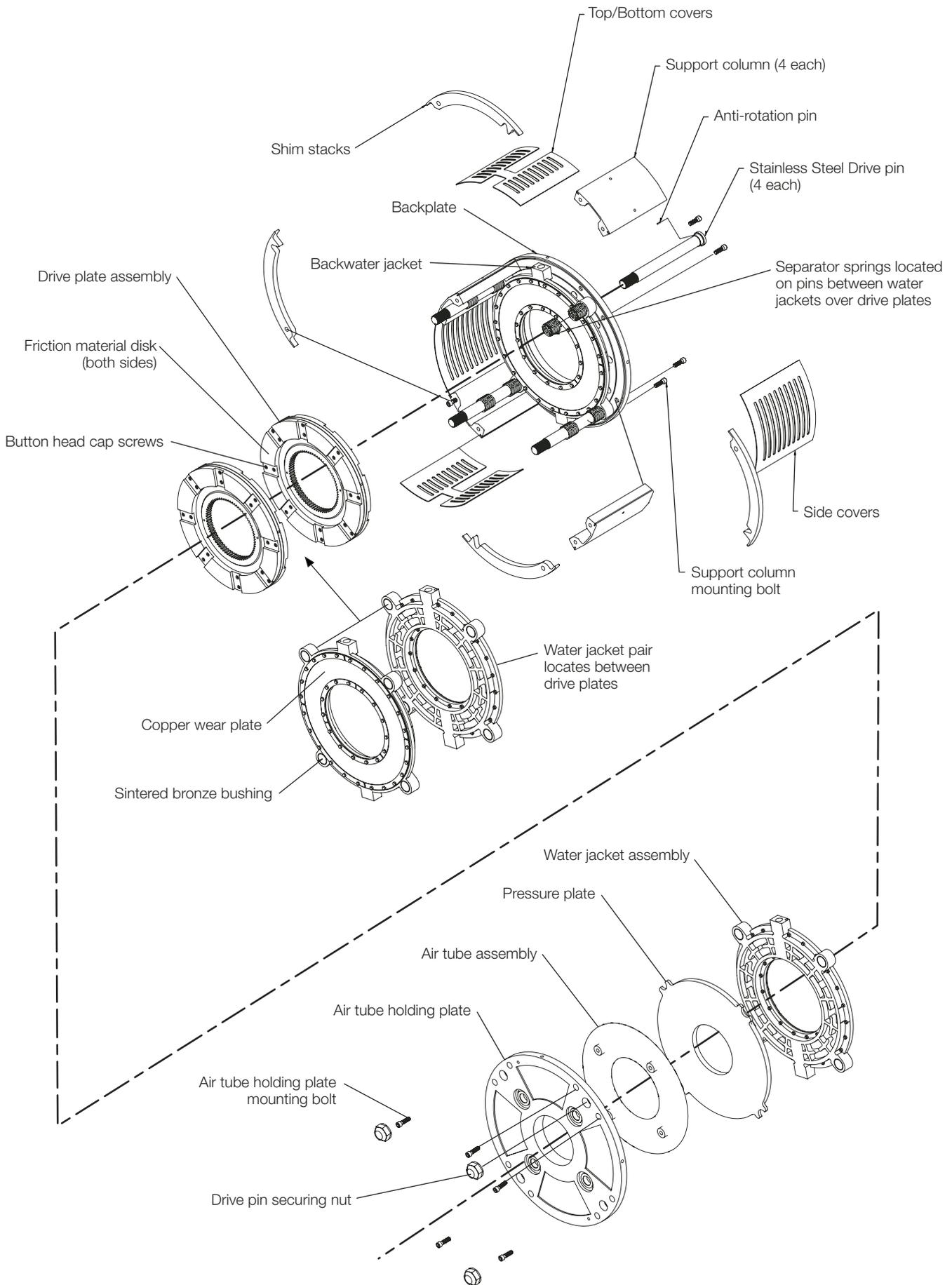
Model Size ATD-	Assembly Number	Dynamic Torque Capacity				Heat Capacity		Max Bore Rect. Key in/mm
		lb.in.		Nm		Series	Parallel	
		80 PSI	100 PSI	5.5 BAR	7 BAR	Water Hosing HP/kW	Water Hosing HP/kW	
KKB119AM	7-119AM-W-1000	66,500	83,100	7,500	9,380	93/69	185/138	5.50/140
KKB219AM	7-219AM-W-1000	133,000	166,300	15,000	18,700	185/135	370/276	5.50/140
KKB319AM	7-319AM-W-1000	199,500	249,000	22,500	28,100	278/207	555/414	5.50/140
KKB225AM	7-225AM-W-1000	264,000	330,000	29,800	37,200	350/261	700/522	8.13/207
KKB325AM	7-325AM-W-1000	396,000	495,000	44,700	55,900	600/447	1200/895	8.13/207
KKB136AM	7-136AM-W-1000	322,000	402,000	36,300	45,400	425/317	850/633	8.13/207
KKB236AM	7-236AM-W-1000	644,000	805,000	72,700	90,900	875/652	1750/1304	9.00/229
KKB336AM	7-336AM-W-1000	966,000	1,208,000	109,100	136,400	1275/950	2550/1900	9.00/229
KKB436AM	7-436AM-W-1000	1,288,000	1,611,000	145,600	182,000	1700/1260	3400/2535	9.00/229

Mounting Hole Pattern

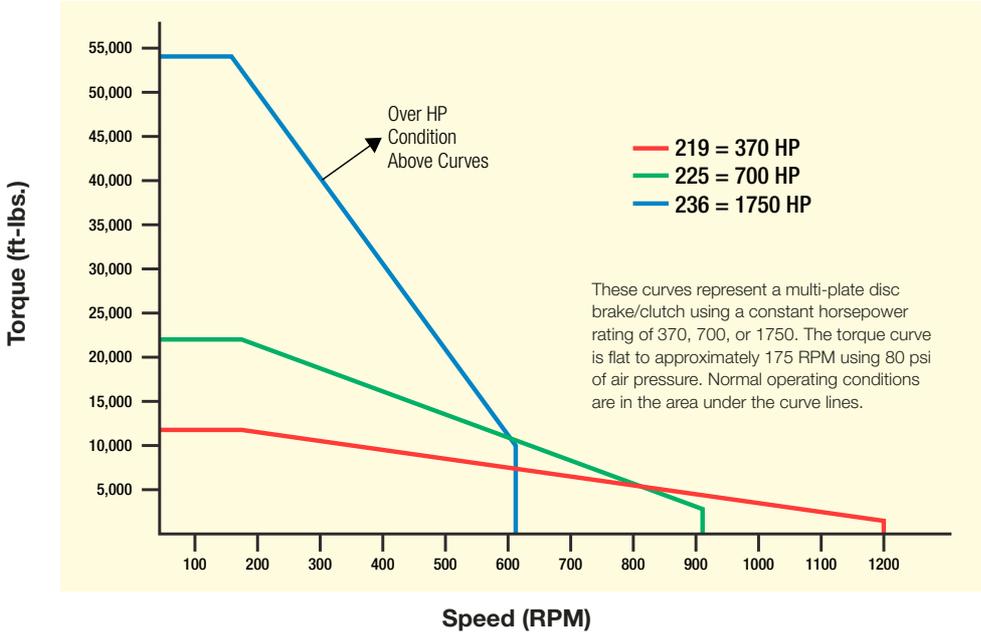
Model	ØA		ØB		ØC		Hole Circle		PLT THK	
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
19	28.28	718	11.00	279	.656	17	25.50	648	1.38	35
25	34.12	867	16.70	424	.656	17	31.00	787	1.38	35
36	45.50	1156	16.75	425	.787	20	42.75	1085	1.38	35



Exploded View



Horsepower Curves 219, 225, 236 AquaMaKKs
(Standard Linings)



Genuine Wichita Replacement Parts

When you specify genuine replacement parts from Wichita Clutch, you automatically expect more... and get more. Especially better performance, longer life, and the peace of mind that comes with knowing that you are working with the industry's proven leader.

We have years of experience in building value into every Genuine Wichita Replacement Part. Our parts, made with quality materials and leading-edge technology, are long lasting, resulting in lower life cycle costs, they also fit precisely to give you the assurance of trouble-free performance.

We offer a three-year warranty on our line of replacement air tubes, and a two-year warranty on all other non-wear components. That's unmatched by anyone in our industry!



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*Pneumatic and Oil Immersed
Clutches and Brakes*

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

Marland Clutch

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Overrunning Clutches
and Backstops*

Matrix International

*Electromagnetic Clutches and
Brakes, Pressure Operated
Clutches and Brakes*

Nuttall Gear and Delroyd Worm Gear

*Worm Gear and
Helical Speed Reducers*

Saftek Friction

*Non-asbestos Brake and
Clutch Materials*

Stieber Clutch

*Overrunning Clutches
and Holdbacks*

Twiflex Limited

Caliper Brakes and Thrusters

Warner Electric

*Electromagnetic Clutches
and Brakes
Precision Electric Coils*

Warner Linear

*Linear Actuators
and Guideways*

Wichita Clutch

*Pneumatic and Oil Immersed
Clutches and Brakes*

