



MagnaDrive[™]
CORPORATION

SUSTAINABLE MAGNETIC TORQUE TRANSFER TECHNOLOGY

SUSTAINABLE MAGNETIC TORQUE TRANSFER SOLUTIONS FROM MAGNADRIVE ELIMINATE IMPACT ON YOUR EQUIPMENT AND THE EARTH



Studies show that over 80% of all rotary equipment failures are related to vibration. What if vibration could be eliminated? Our patented Air Gap technology tolerates significantly more misalignment than traditional couplings, and eliminates vibration transfer between shafts.

In today's modern work environments, Electromagnetic Interference (EMI) can be a big source of frustration. MagnaDrive couplings emit less EMI than the associated motor, protecting your critical equipment from electrical damage. Costly repairs no longer stand between you and your bottom line.



Unlike traditional full-contact couplings, MagnaDrive's magnet rotor and conductor rotor are never in contact with each other. That means no grease points and no connection to wear out, increasing motor life and protecting your investment. Bearings, seals and other equipment last twenty plus years—a significantly longer life than traditional solutions.

Constructed from corrosive resistant materials, coatings, and durable electroplating, MagnaDrive's patented technology is tough and dependable in extreme conditions ranging from -40° F to 150° F.



MagnaDrive couplings and adjustable speed drives are approximately 98% efficient with no additional energy loss from ancillary equipment. Our Air Gap eliminates friction and provides cushioned starts that reduce in-rush current demand, saving energy where it is used the most—for the entire lifetime of the technology.

MagnaDrive's torque transfer solutions can be tailored to meet the exact performance demands of your system, resulting in substantial energy savings.



U.S. Department of Energy testing demonstrated that MagnaDrive products reduce energy usage by up to 70% over the course of a product's lifetime, compared to traditional couplings.

SYNCHRA™ 200-700 SERIES 10-1500 hp

HIGHLIGHTS:

- No RPM Slip - Synchronous RPM Transfer
- Safe, Reliable Over Torque Protection of Critical Equipment
- Automatic Re-Set
- Compact Design
- Accepts Significant Misalignment
- No Maintenance Required

Ideal for Industrial, Wastewater, and Oil & Gas Applications Subject to:

- Pulsating Loads & Seizures
- Thermal Expansion
- Shock Loading
- Tight Space Constraints



NON-SLIP COUPLINGS

Power that floats across a gap of air

MagnaDrive replaces the physical connection between motor and load with a gap of air. Interaction between permanent magnets and non-ferrous conductors smoothly transmits torque across the Air Gap from motor to load, and sets the load spinning. Friction, and vibration transfer between shafts, is completely eliminated, reducing energy and maintenance costs and lightening our impact on the earth.

MAGZONE™ 200-700 SERIES 10-1500 hp

HIGHLIGHTS:

- ATEX Rated 
- No Instrumentation Required
- No RPM Slip
- Safe, Reliable Over Torque Protection of Critical Equipment
- Automatic Re-Set
- Accepts Significant Misalignment
- No Maintenance Required
- Maximizes Torque

Ideal for Industrial, Wastewater, and Oil and Gas Applications Subject to:

- Load Seizures & Jams
- Thermal Expansion
- Hazardous Locations
- Shock Loading
- Tight Space Constraints



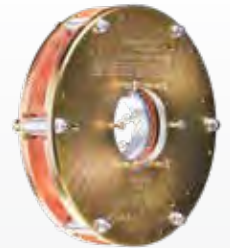
FGC™ | EMAX™ 5-4000 hp

HIGHLIGHTS:

- Up to 30% Energy Savings on Variable Torque Pump and Fan Applications
- Tolerates Significant Misalignment
- Rugged and Reliable
- Cushioned Start
- Adjustable Air Gap Spacers for Fine-Tuned Torque
- Customizable to Fit Virtually Any Space
- Ideal for High Inertia Systems
- Passed the Navy's Rigorous 9-G Shock Test (FGC)

Ideal for Mining and Cement, HVAC, Pulp and Paper, and Manufacturing Applications Subject to:

- Tight Space Constraints
- Fluid Coupling Problems



MagZone requires no monitoring and emits no heat, making it ideal for classified areas and hazardous conditions.

FedEx saves 59% in operating costs annually versus traditional couplings*, and realizes a significant reduction in downtime from maintenance in an industry where every second counts.



**MAGNADRIVE HELPS INDUSTRIES
ACROSS THE GLOBE REALIZE
HIGHER PERFORMANCE,
LOWER OPERATIONAL AND
MAINTENANCE COSTS, AND
UP TO 70% ENERGY SAVINGS**

MGD™ MAGNAGUARD DELAY

25-1000 hp

HIGHLIGHTS:

- Up to 30% Energy Savings on Variable Torque Pump and Fan Applications
- Tolerates Misalignment
- Rugged and Reliable
- Cushioned Start
- Adjustable Air Gap Spacers for Fine-Tuned Torque
- Customizable to Fit Virtually Any Space
- Ideal for High Inertia Systems

Ideal for Mining and Cement, HVAC, Pulp and Paper, and Manufacturing Applications Subject to:

- Pulsating Loads
- Shock Loading
- Fluid Coupling Problems



MGTL™ MAGNAGUARD TORQUE LIMITING

50-1000 hp

HIGHLIGHTS:

- Protects Valuable System Components From Damage
- Self-Resetting When Motor is Turned Off
- Advanced Cushioned Start
- Preset Peak Torque Disconnects the Motor From the Load During Load Seizures or Jams

Ideal for Mining and Cement, HVAC, Pulp and Paper, and Manufacturing Applications Subject to:

- Overload Protection
- Pulsating Loads
- Shock Loading



**Minnesota Power saves 84%
per MGD annually*. MGD's paid
for themselves in only 4 months.**

**The City of San Antonio saves 76%
annually in non-energy operation
and maintenance costs, per MGTL.**



ADJUSTABLE SPEED DRIVES



CUSHIONED START COUPLINGS

MC-800™ MAGNETIC CONVEYOR CLUTCH

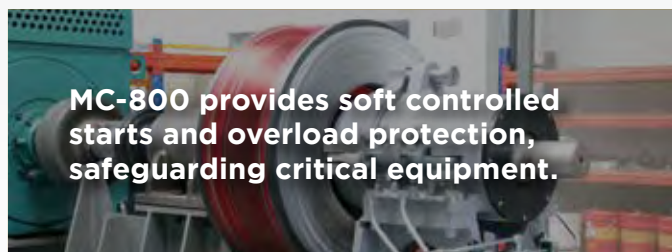
100-2000 hp

HIGHLIGHTS:

- Reduced Motor Power/Current Start
- Automatic Control
- 4-20 mA or 0-5 Volts
- Unloaded Motor Start to Full Speed
- Soft Controlled Start
- Overload Protection
- Reliable in Dusty Environments

Ideal for Mining and Cement, and Manufacturing Applications Subject to:

- Temporary Overload
- Shock Loading



MC-800 provides soft controlled starts and overload protection, safeguarding critical equipment.

ASD™ ADJUSTABLE SPEED DRIVE AIR COOLED & WATER COOLED

Up to 4000 hp



HIGHLIGHTS:

- Up to 70% Energy Savings (As Tested by the DOE)
- 98% Efficiency
- Fully Automated Process Control
- Accepts Misalignment
- Allows Motors to Operate at Full Speed (Where Cooling is More Effective)
- Requires Only Electric Power and Control Signal to the Actuator
- Eliminates Harmful Electronic Harmonics
- Eliminates Control Valves & Dampers
- Optional Manual Speed Adjustment
- Does Not Require Use of an Inverter-Duty Motor
- Readily Installed—Retrofit or New Install
- Lowest Total Cost of Ownership
- Meet or Exceed Process Goals
- Custom Features Available



AIR COOLED
Rigid Pedestal
Mount Kit



AIR COOLED
Vertical Kit



WATER COOLED
Horizontal or
Vertical Kit

Your Solution for:

- Vibration from Misalignment
- Temporary Overload
- Pulsating Loads
- Thermal Expansion
- Shock Loading
- High Starting Inertia
- Dirt and Grit
- VFD Operation Issues
- High Energy Costs

The U.S. Navy saves 52% annually per ASD. Each ASD realizes 70% less vibration, and paid for themselves in just 6 months.

* Non-Energy Operational Costs.
Case Studies available on request.

MAGNADRIVE IS THE WORLD LEADER IN PERMANENT AND SUSTAINABLE MAGNETIC TORQUE TRANSFER

Top Benefits

- Saves up to 70% of Energy Costs
- Up to 98% Efficient
- Easy Installation
- Virtually No Maintenance
- No Fluids, Oils, or Chemicals
- Increases Bearing and Seal Life
- The Air Gap in the Coupling Eliminates the Mechanical Connection Between the Motor and Load, Reducing Wear and Tear on Equipment
- Tolerant of Misalignment
- Eliminates Vibration From Misalignment
- Cushioned Motor Start Reducing System Mechanical Stresses
- “Slips Through” Temporary Overload Conditions
- Cushions Shock-Loadings
- Constructed From Corrosive Resistant Materials, Coatings, and Durable Electroplating
- Reliable in Difficult and Dirty Environments—Indoors or Out
- Designed to Withstand Air Temperatures From -40° F to 150° F
- Allows for Thermal Expansion
- No EMI to Affect Electronics
- Suitable for Both Constant and Variable Torque Applications
- Ideal for Tight Space Constraints
- Rapid Return on Investment
- Low Total Cost of Ownership
- Custom Solutions Available

COUPLING APPLICATIONS

- ✓ Fans
- ✓ Pumps
- ✓ Conveyors
- ✓ Bucket Elevators
- ✓ Air Preheaters
- ✓ Crushers
- ✓ Shredders
- ✓ Hammer Mills
- ✓ Cooling Towers
- ✓ Pulverizers
- ✓ Mixers
- ✓ De Barkers
- ✓ Chippers
- ✓ Breakers
- ✓ Generators
- ✓ Dryers
- ✓ Clinker Grinders
- ✓ Ball Mills
- ✓ Agitators
- ✓ Re-claimers

ASD APPLICATIONS

- ✓ Centrifugal Pumps, Fans, and Blowers

MagnaDrive
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