

# Product Program



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### 1. Electromagnetic Multi-disc Clutches & Brakes (Flux through plates)

- Wet operation
- Steel-steel friction combination
- Stationary field or rotating field option

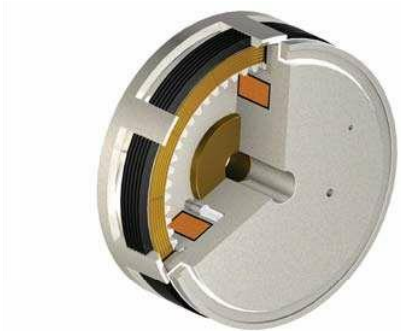
Rated dynamic torque: **5Nm to 10.000Nm**  
Outer diam. range: **70mm to 470mm**



### 2. Electromagnetic Multi-disc Clutches & Brakes (Flux outside plates)

- Wet or dry operation (special self adjusting design possible)
- Steel-sintered bronze or Steel-liner friction combination
- Rotating field (special stationary field design possible)

Rated dynamic torque range: **10Nm to 10.000Nm**  
Outer diam. range: **100mm to 560mm**



### 3. Electromagnetic Release Spring Applied Multi-disc Fail-safe Clutches & Brakes

- Wet or dry operation
- Zero backlash option
- Steel-Bronze or Steel-Sintered Bronze or steel-Liner (Non-Asbestos) friction combination
- Rotating field (special stationary field design possible)

Rated dynamic torque range: **10Nm to 600Nm**  
Outer diam. range: **100mm to 255mm**



### 4. Electromagnetic Toothed Clutches & Brakes

- Wet or dry operation
- Zero backlash option
- Variable tooth profiles as option (Overload protection teething, single position engagement teething, Self locking under load teething, etc)
- Stationary or rotating field options
- Highest Torque v/s dimension ratio

Transmitting torque range: **6Nm to 40.000Nm**  
Outer diam. range: **40mm to 560mm**



## 5. Electromagnetic Single-disc Clutches & Brakes

- Zero backlash
- Dry operation
- Non-asbestos liner friction surface
- Stationary field
- Various mounting options

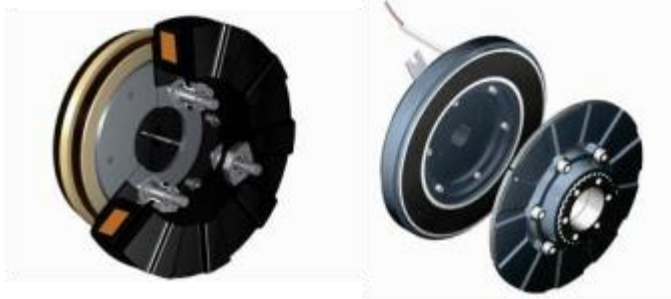
Transmitting torque range: **0.2Nm to 2.400Nm**  
Outer friction diam. range: **23mm to 500mm**



## 6. Electromagnetic Self-Adjusting Single-disc Clutches & Brakes

- Zero backlash
- Dry operation
- Non-asbestos liner friction surface
- Stationary field or rotating field option
- Self wear adjusting
- Long Life & higher heat dissipation capacity
- Various mounting options

Transmitting torque range: **0.15Nm to 1.800Nm**  
Outer friction diam. range: **23mm to 390mm**



## 7. Electromagnetic Pole-face Friction Clutches & Brakes

- Zero backlash
- Dry operation (Wet Operation is also possible)
- Non-asbestos liner friction surface
- Stationary field
- 4-pole or 6-pole faces for high torque v/s size ratio
- Various mounting options

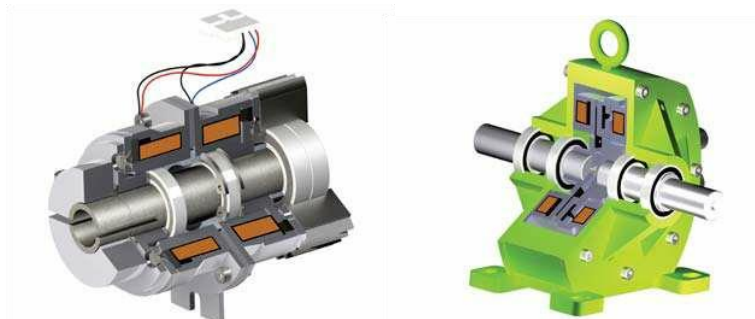
Rated dynamic torque range: **5Nm to 4.800Nm**  
Transmitting torque range: **6Nm to 6.000Nm**  
Outer friction diam. range: **58mm to 480mm**



## 8. Electromagnetic Clutch Brake Combination Units

- Clutch-Clutch or Clutch-Brake combination
- Open or enclosed units
- Zero backlash
- High cycling frequency
- Enclosed units with simple wear adjustment device
- Up to IP65 Protection with enclosed version
- Many mounting and adaption versions available

Torque range: **8Nm to 2.400Nm**



### 9. Electromagnetic Release Spring Applied Fail-safe Brakes (D.C & A.C designs)

- Versions for D.C or A.C Operations Voltage
- Modular with several optional features & accessories
- Special versions for port, explosion-proof requirements
- Standard non-asbestos dual friction surfaces (option, sintered friction surfaces)

Rated brake torque range: **1Nm to 1.000Nm**  
 (up to 6.300Nm on request)  
 Outer diam. range: **60mm to 365mm**  
 (up to 560mm on request)



### 10. Electromagnetic Release Spring Applied Fail-safe Holding Brakes (D.C voltage)

- Low cost brake designed for holding application
- Emergency braking capability
- IEC or NEMA Motor mounting ready

Rated brake torque range: **0.1Nm to 1.500Nm**  
 Outer diam. range: **37mm to 365mm**

### 11. Permanent Magnet Brakes & Clutches

- Dry operation
- Brake: Steel-Steel friction surface as standard
- Clutch: Steel-Liner (Non-Asbestos) friction combination standard
- Zero backlash
- High Temperature resistant, rare-earth magnets
- Variety of mounting and adapting options

Rated brake torque range: **0.4Nm to 130Nm**  
 Outer friction diam. range: **32mm to 160mm**



### 12. Electromagnetic Clutches For Vehicle Air-conditioning Compressors

- Steel-Steel friction surface
- Optional with temperature sensor to avoid coil burn out
- Integrated pulley
- Pulley trough magnetic circuit or pulley outside magnetic circuit options
- All SPA & SPB Single and multi groove can be integrated

Transmitting torque range: **120Nm to 800Nm**

### 13. Hydraulically/Pneumatically Operated Multi-disc Clutches & Brakes

- Hydraulic actuation: Steel-Sintered bronze friction combination
- Pneumatic actuation: Steel-Liner (Non-Asbestos) friction combination
- Rated dynamic torque range (Hydraulic): **100Nm to 6.000Nm**
- Operating hydraulic pressure: **16 to 24 bar**
- Rated dynamic torque range (Pneumatic): **60Nm to 3.750 Nm**
- Operating pneumatic pressure: **5.5 bar**
- Outer diam. range: **90mm to 315mm**



### 14. Custom Built Electromagnetic, Mechanical & Pneumatic Clutches & Brakes

- Transmissible torque range: **0.1Nm to 60.000**
- Outer diam. range: **Up to 600mm**



Pneumatic toothed Clutch-Clutch combination unit for tyre building M/C



Electromagnetic single position toothed clutch for moving, positioning & holding the scanner in a SPECT-CT Scanning & Nuclear Imaging Machine



Electromagnetic bistable clutch with permanent magnet for power sliding doors & power Lift gate on luxury passenger cars & SUV's: 4 torque/position modes

