Eaton® Clutches
Fact Sheet

Diaphragm Spring Clutch

More protection. Less maintenance.

Development & Design Expertise

Eaton holds 62 United States patents for self-adjust technology, ceramic facings, clutch controls and torsional solutions.

In addition to design of control and clutch architecture, Eaton has core competency in development of clutch-related software:

- engagement control
- protection
- health monitoring
- torsional vibration management
- clutch brake controls
- torque management

Eaton is a leading world-wide supplier of medium- and heavy-duty clutches to the commercial truck industry. Eaton clutches are unmatched in terms of reliability, durability and performance.

Eaton clutches feature extended maintenance intervals and dampening innovations that help protect important driveline components from harmful vibrations.

Eaton's diverse lineup of clutch platforms and solutions include:

Manual Clutches

- Angle Spring:
  Eaton is the global leader in this technology with torque applications from 600 to 3050 Nm. This technology is especially popular in North America due to its longevity.
- Diaphragm Spring:
  For global applications available from 330 to 430 mm and 450 to 2700 Nm.

Eaton's automated clutches are used in Automated Mechanical Transmission and Hybrid power systems and are available in torque applications from 450 to 3050 Nm.

- Centrifugal: Cost effective automation solution that relies on engine RPM for engagement.
- Electronic Clutch Actuation: Available in both angle spring and diaphragm spring clutch designs, these use Eaton's Electronic Clutch Actuator for precision engagement and control.

Eaton offers clutches for the full life cycle of the vehicle. Whether it is the OEM specification, aftermarket replacement or remanufactured, all Eaton clutches adhere to the strict OE standards and include genuine components.

Available Everywhere

No matter where you are globally, quality Eaton clutches are always available.

Eaton's manufacturing footprint is strategically located throughout the globe to ensure customers have access to a wide portfolio of clutches quickly. Facilities are located in Europe, China, South Africa, Brazil, United States, Australia and Mexico.

Angle Spring Clutch

Powering Business Worldwide

Eaton Corporation is a diversified power management company ranked among the largest Fortune 500 companies. Eaton is a global leader in electrical components and systems for power quality, distribution and control; hydraulics components, systems and services for industrial and mobile equipment; aerospace fuel, hydraulics and pneumatic systems for commercial and military use; and truck and automotive drive-train and powertrain systems for performance, fuel economy and safety. Eaton has approximately 73,000 employees and sells products to customers in more than 150 countries. www.eaton.com

© 2012 Eaton Corporation, All Rights Reserved, Publication No. CLFC0100A4, January 2012

Thermal management

Eaton's torque and thermal management systems manage heat better to improve performance, reduce linkage noise and wear and help prolong the life of the drivetrain.

Facings

Eaton provides clutch discs in a variety of different torque capacities. Proprietary disc-facing compounds offer low facing wear, allowing for longer life, as well as the smoothest engagement and highest coefficient of friction in the industry.

- **Organic:** Provides very good clutch engagement with gentle flywheel wear ideal for normal non-abusive applications where an economical solution is desirable.
- **Cushion Ceramic:** Offers comfort and durability.
- **Ceramic:** Ideal for high-torque engines, severe service applications or overload situations where clutch abuse may occur. Ceramic facings provide very good clutch engagement and low wear in high thermal conditions that would adversely affect organic facings.

Superior dampening

Ninety-percent of a clutch's work cycle is spent dampening vibrations from the engine to the drivetrain. Eaton clutch discs reduce the vibratory torque transmistted through the drivetrain by using a low-rate or "soft" spring characteristic. This low rate prevents the damaging effects of the severe torsional vibrations from occurring. Pre-dampers are also available for improved vibration control at idle.

Clutch Portfolio Capability

	Angle Spring	Diaphragm Spring
Torque		
Minumum	600 Nm	450 Nm
Maximum	3050 Nm	2700 Nm
Type		
Push	●	●
Pull	●	●
Plate		
Single	●	●
Twin	●	●
Facing		
Ceramic	●	●
Cushion Ceramic	●	●
Organic	●	●
Style		
Wear Thru	●	●
Self Adjust	●	●
Cover		
Cast	●	●
Stamped	●	●
Size		
14.0 inch	●	
15.5 inch	●	
330 mm		●
350 mm		●
362 mm		●
365 mm		●
395 mm		●
430 mm		●
Application		
Auto/Light		●
Bus	●	●
Long Haul	●	●
Delivery	●	●
Vocational	●	●
Manufacturing		
United States	●	●
Brazil		●
China		●
Mexico	●	●
Netherlands		●

Powering Business Worldwide

© 2012 Eaton Corporation
All Rights Reserved
Form No. CLFC0100
January 2012

North America
Kalamazoo, Michigan United States
Tel: +1-269-342-3000

India
Pimpri, Pune – India
Tel: +91-20-30611565

Asia Pacific
Shanghai, China
Tel: +86-21-52000099

South America
Valinhos, Sao Paulo – Brazil
Tel: + 55 19 3881-9286

Europe, Middle East & Africa
Rastatt, Germany
Tel: +49-7222-15998652