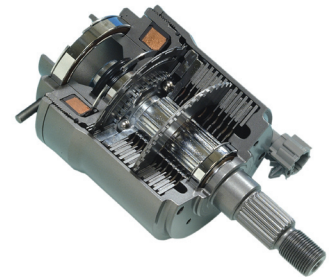




Electro-Magnetic Control Device (EMCD®)

GKN Driveline's Electro Magnetic Control Device (EMCD®) as an actively controlled coupling in on-demand and full-time all-wheel-drive drivelines as well as in axle applications. EMCD® is a most compact and versatile electronically controlled driveline and axle coupling.

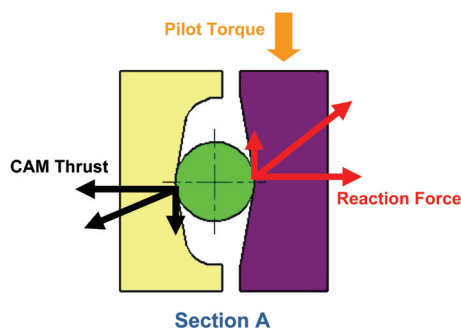


Benefits

- > Improved vehicle traction and handling
- > Compact design
- > Low power consumption
- > Lightweight and reliable
- > In production since 2001 (axle differential since 1991)

Operating Principle

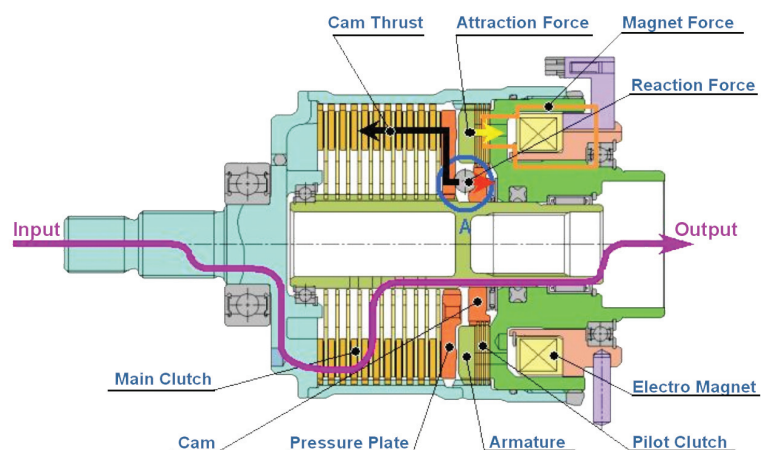
- > Current supplied to an electro-magnet generates a magnetic field causing the armature to compress the pilot clutch
- > The resulting pilot clutch drag generates a rotational torque across a bi-directional ball-ramp mechanism
- > This rotational force causes the balls to roll up the opposing ramps which pushes the front cam forward
- > The cam thrust is transmitted through the pressure plate compressing the main clutch



- > The rotational torque from the outer plates (input) is then transferred to the inner plates (output) proportional to the electrical current
- > An Electronic Control Unit (ECU) controls the clutch torque by adjusting the amount of current based on available vehicle inputs and control algorithm

Technical Features

- > Closed/sealed clutch lubrication in on-demand applications
- > Steel pilot clutch is specifically grooved and heat treated for optimum durability and low drag
- > 3.0 A maximum current



For further information please contact:

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