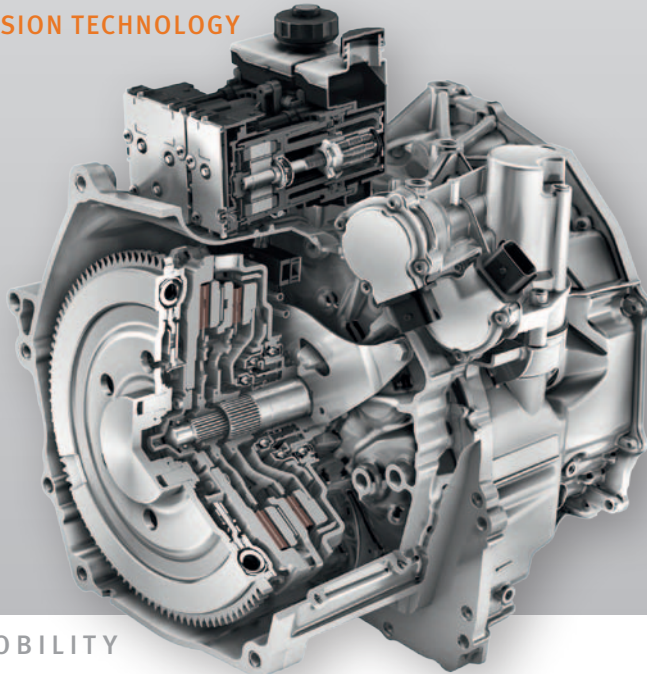


Region
E-Mobility
DCT systems

SCHAEFFLER

Components for Modern Double Clutch Transmissions

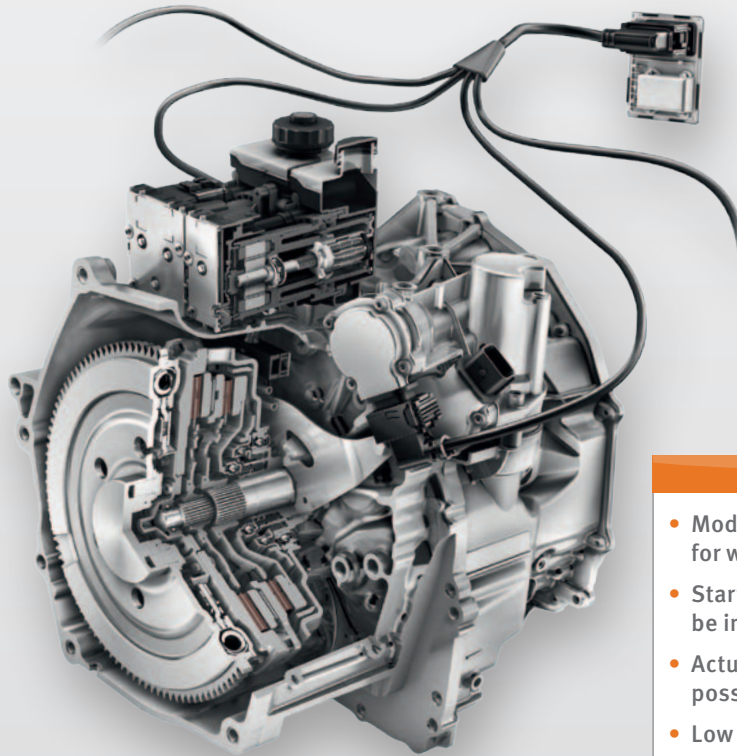
EXPERTISE IN TRANSMISSION TECHNOLOGY



EFFICIENT FUTURE MOBILITY



Focus on the Overall System



The clutch and gear actuation subsystems are developed by breaking down the customer's requirements to the subcomponent level. This ranges from mechanical, hydraulic, electric, and electronic design right through to software development. Verification takes place in the opposite direction, from the subcomponent up to the system in accordance with the V-model.

BENEFITS

- Modular, requirement-based actuation for wet and dry DCT applications
- Start-stop and sailing operation can be implemented easily
- Actuation of electric parking lock is possible
- Low fuel consumption
- Low CO₂ emissions
- Very good driving comfort and sporty feeling

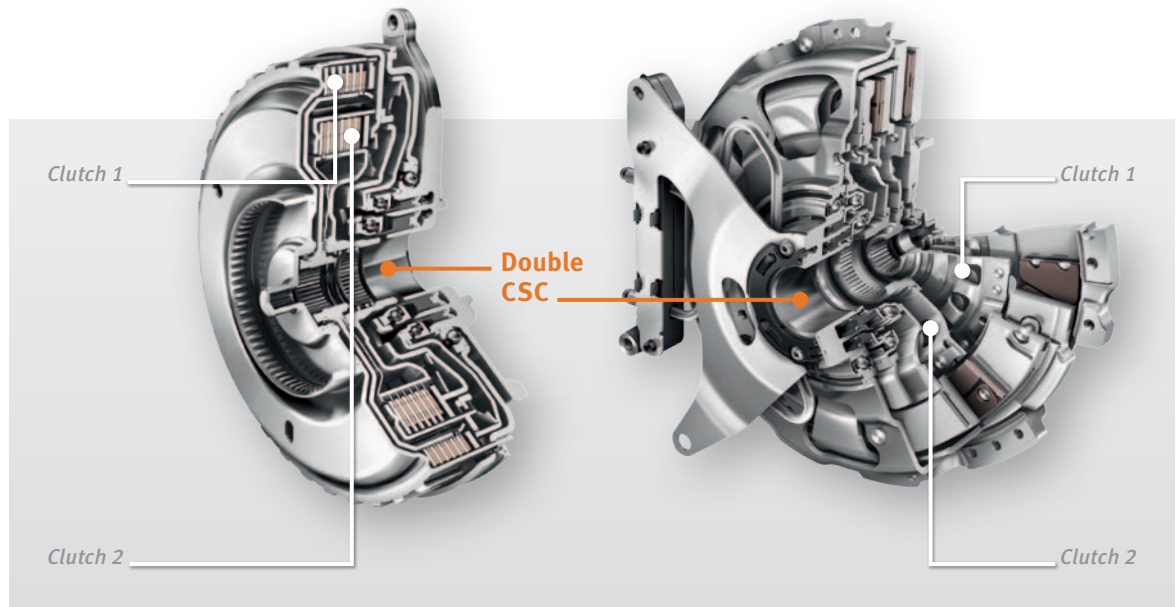
Wet and Dry Double Clutches

New developments, higher efficiency

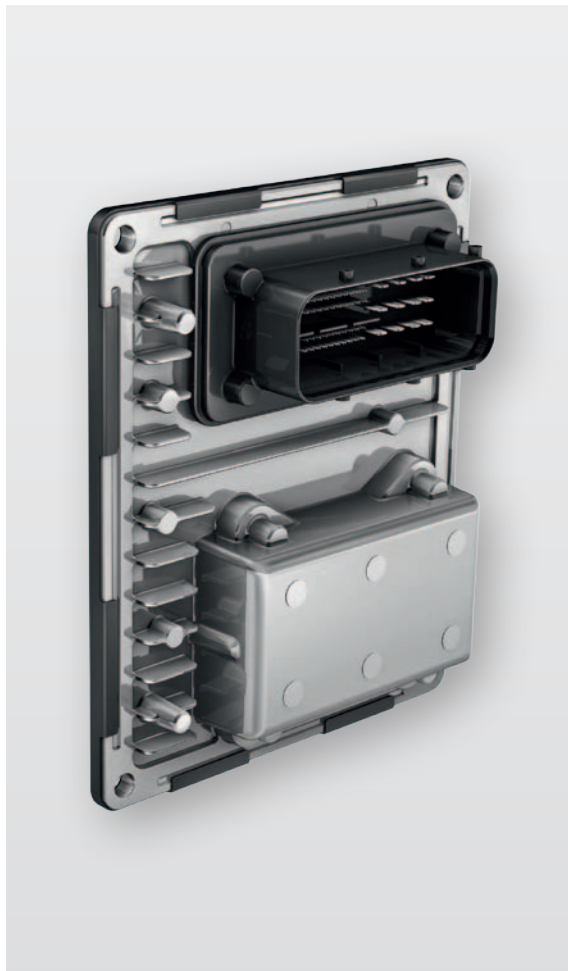
The new design of wet and dry double clutches enables compatibility with hydraulic powerpacks and hydrostatic clutch actuators (HCA) through an integrated double CSC (concentric slave cylinder) with non-rotating pistons. Locating the bearing support on the cover prevents support forces on the crankshaft and input shaft. This design is consequently highly resistant to NVH side effects.

FEATURES

- Integrated double CSC
- Design is resistant to NVH side effects
- No support forces on the crankshaft or transmission input shafts
- Compatible with powerpacks and hydrostatic clutch actuators (HCA)



System and Software Expertise



The clutch and the transmission are controlled as required by the customer via specially adapted software interfaces. Adaptation routines ensure comfortable gearshifts throughout the product's entire lifetime. In addition, Schaeffler offers a complete transmission control software program with a calibration interface, which represents a complete system solution for the customer.

FEATURES

- Software modules for torque and gear interface
- Complete transmission control software with calibration interface
- Clutch and gearshift adaptation routines, temperature model
- Software damper

Hydrostatic Clutch Actuator (HCA)

Description

- Hydrostatic actuator with integrated reservoir
- Standardized component for stand-alone operation with local control unit (LCU) for different applications

Functional advantages

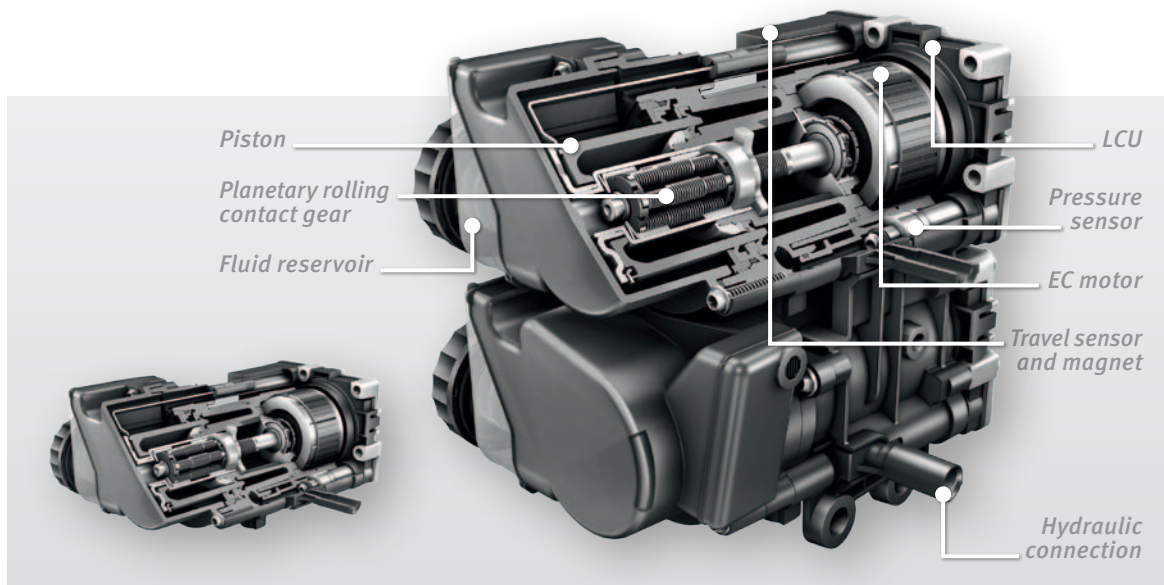
- Fast and precise control without additional sensors on the clutch
- For actuation of different clutches in conventional, hybrid, and electric drive trains

Product benefits

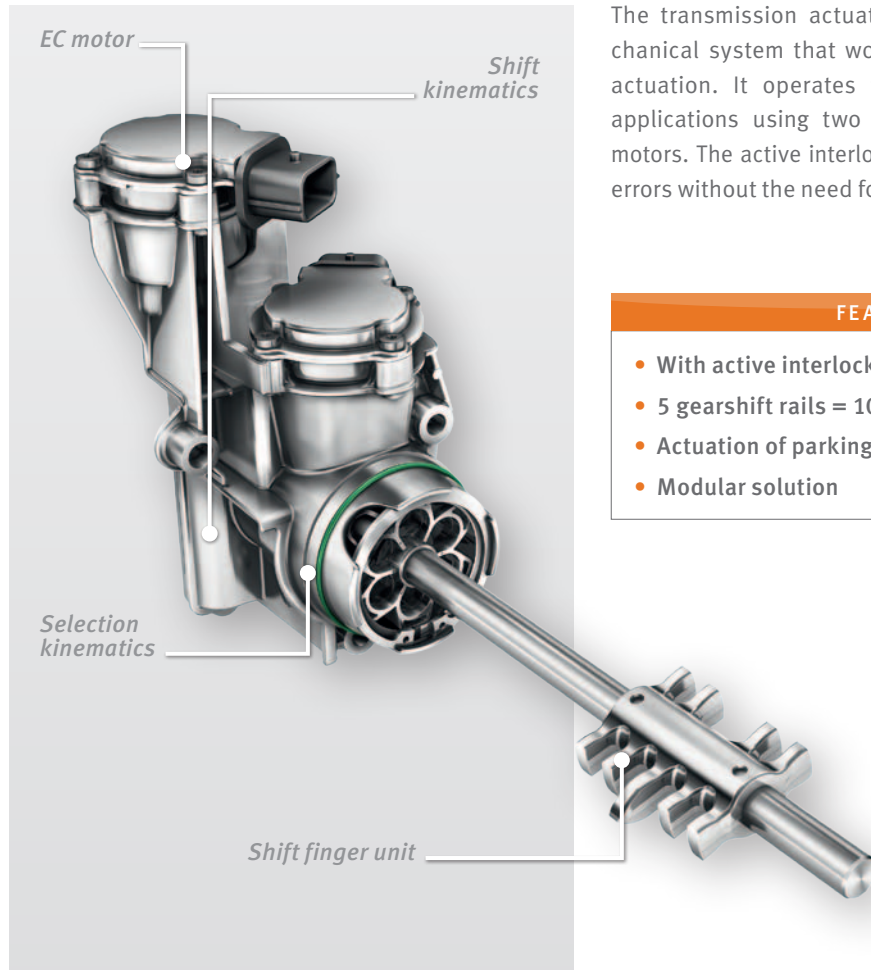
- Significant fuel savings
- High efficiency in output and actuation force

Integration/installation

- Can be modified for single or double actuations, and different mounting positions are possible
- Suitable for use in wet and dry clutch applications



Active Interlock Transmission Actuator



The transmission actuator is a modular electromechanical system that works independently of clutch actuation. It operates transmissions for AMT/DCT applications using two efficient, brushless electric motors. The active interlock principle prevents shifting errors without the need for additional sensors.

FEATURES

- With active interlock
- 5 gearshift rails = 10 gearshift elements
- Actuation of parking lock is possible
- Modular solution

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Issued: 2014, July

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