

FEV Signature Solutions

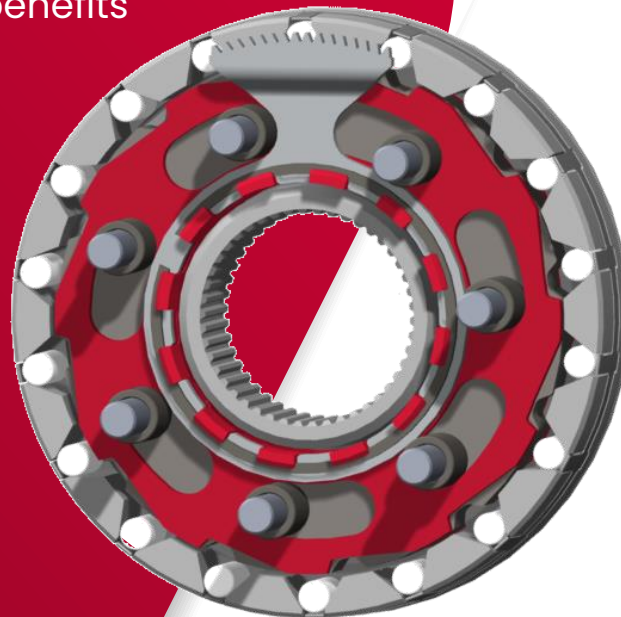
Park lock for electric drive units



Our unique park lock solution provides you with radical improvements of today's conventional systems

FEV offers

- ▶ Unique park lock concept with significant benefits
 - no rollback
 - no ratcheting
 - low bearing loads
 - small, low power actuator
- ▶ Ideally suited for EDUs with integrated electric motors



Why FEV

- ▶ Huge experience (30+ projects) in park lock system design, simulation and trouble shooting
- ▶ In-house simulation tool chain including analytical layout, structural analysis (FEA) and 3D multibody simulation (MBS)
- ▶ Wide variety of additional services around park lock systems in concept phase and detail design, as DVP definition, FMEA, FuSy, 3D tolerance analysis, CAE
- ▶ Customization services for prototypes or series applications

Reference projects

FEV PARK LOCK EXPERIENCE



German OEM Rotating cam (Series development)	Global OEM Pull cone (Series development)	European Tier-1 Pull cone (B-Sample)	European OEM Various (Benchmark)	European OEM Roller (Benchmark)	European Tier-1 Pull cone (B-Sample)	German OEM Pull cone (A-Sample)	Asia OEM Roller (B-Sample)	European Tier-1 Pull cone (B-Sample)
European Tier-1 Pull cone, roller (B-Sample)	Global Tier-1 Pull cone (Prototype)	European Tier-1 Pull cone (B-Sample)	European Tier-1 Pull cone (Series development)	German Tier-1 Rotating cam (B-Sample)	FEV concept Rotating cam (Prototype)	Global Tier-1 Electric wheel brake (Benchmark)	German OEM Axial dog clutch (B-Sample)	FEV concept Axial dog clutch (Prototype)
German OEM Pull cone (Prototype)	European Tier-1 Pull cone (Series development)	FEV concept Rotating cam (Prototype)	German OEM Pull cone (Series development)	OEM Pull cone (Series development)	European Tier-1 Pull cone (Series development)	European Tier-1 Pull cone (Series development)	European Tier-1 Rotating cam (A-Sample)	German OEM Pull cone (A-Sample)
US OEM Roller (A-Sample)	US OEM Pull cone (Prototype)	European OEM Roller (Series development)	European OEM Roller (Series development)	US OEM Roller (Series development)	US OEM Pull cone (A-Sample)	US OEM Pull cone (A-Sample)		

- Tractor
- Electric drive unit (EDU)
- Dual clutch transmission (DCT)
- Continuously variable transmission (CVT)



Patent applications

Parking lock with rolling elements

SHAPOVALOV VALERIY
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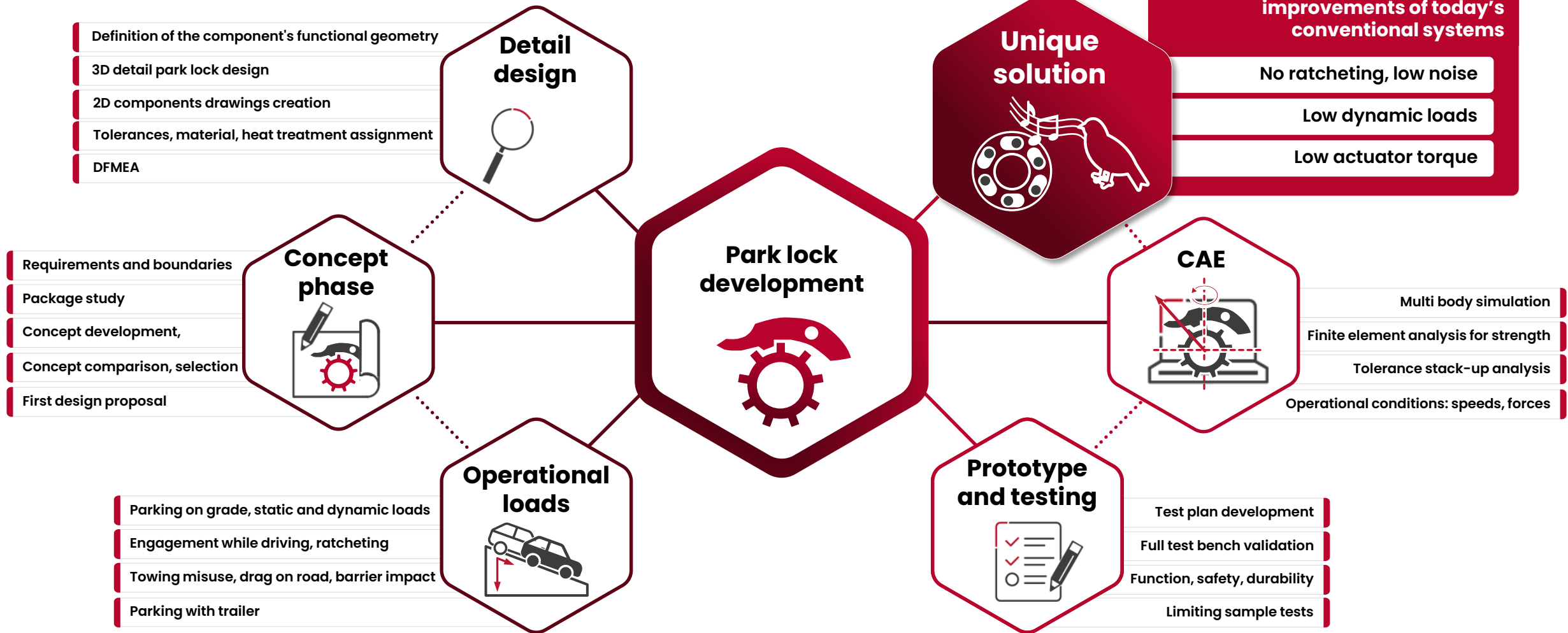
Parking lock

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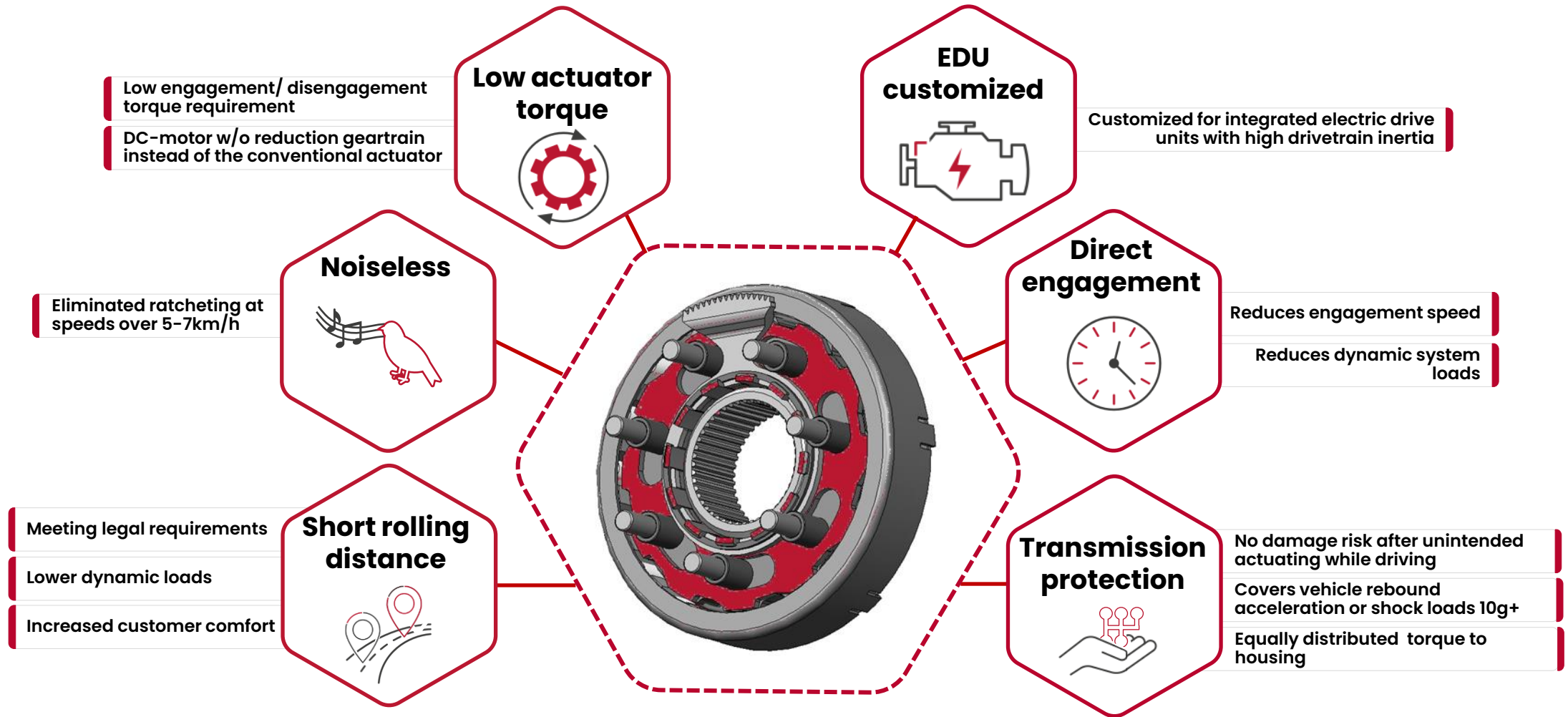
Park lock system development



PARK LOCK DEVELOPMENT FUNCTIONS OVERVIEW



FEV's park lock including many unique features especially beneficial for electric drive units



**Get in touch with us
for further information**

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