

Axle System with Independent Front Suspension

The turn-key solution for electric and
conventional truck applications



ZF's new tailor made axle system with independent front suspension (IFS) for trucks

This turn-key front axle solution provides truck OEMs the required flexibility to design innovative vehicle concepts. Its special low-floor design supports electric vehicle architectures, maximizing space for e-components and batteries, and allowing for 'direct vision' cab designs to enhance driver view. Customers can directly benefit from an innovative integrated solution, setting new standards in safety, efficiency, and comfort.

Value to Customers

- Delivers a complete, go-to-market, front axle system solution simplifying vehicle integration
- Supports electric vehicle architectures by maximizing space for e-components and batteries
- Allows for lower driver's position helping to improve road visibility and enhance safety
- Supports considerably improved steering precision and vehicle handling
- Lower weight compared to rigid axles with air spring offers increased payload
- Provides a high level of maneuverability, improving vehicle handling
- Provides improved vehicle stability and road safety
- Delivers superior ride comfort for drivers

The ZF Difference

- Supports the design of low-entry 'direct vision' cabs for trucks enhancing driver view and thus safety and comfort
- Supports OEM electrification strategies contributing to sustainable and safe urban mobility
- Builds on over three decades of experience in the development and manufacturing of front axles for bus applications with more than 500,000 units sold worldwide



Technical Features

- Integrates air suspension, shock absorber technology and foundation brake system solutions into one front axle
- Delivers a compact, low-floor axle to enable flexible truck design concepts
- Offers optimized axle and steering motion control
- Eliminates need for anti-roll bars with significantly higher roll stiffness
- Enables steering angle up to 56° significantly improving turning radius
- Provides precise wheel guidance to help eliminate undesired bump and brake steering influence
- Allows for lower unsprung mass compared to rigid axles
- Seamlessly integrates with ZF ReAx adaptive steering or electric power steering (EPS)

Technical Data

Axle system with IFS RL 82 ET

Vehicle width	2,300 – 2,600mm
Max. axle load	8,200kg
Wheel travel	+90 / -100mm
Max. steering angle (back-lock/front-lock)	max. 56° / 46° (depending on tire size)
Tire size	275/70 R22.5 – 305/70 R22.5
Wheel size / bolt circle	22.5" x 7.5" – 22.5" x 8.25" / 335mm
Brake	Air Disc Brake
Axle system weight*	482kg

* Axle total weight depends on customer specification

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