



# iEBS Basic

Intelligent Electronic Braking System for Trailers  
with Air or Steel Suspension





Intelligent Electronic  
Braking System for Trailers

# The Industry's Game Changer for Intelligent Trailer Brake Control

– Leveraging more than 35 years of experience –

iEBS Basic Air and iEBS Basic Steel variants bring unparalleled intelligence and safety to pneumatically and mechanically suspended trailers

Closing the technology gap: Improved vehicle control also for mechanically suspended trailers through ABS and RSS

Integrated Emergency Function with ABS-controlled emergency braking and quick drive-off after parking, enhancing safety, uptime and installation (with new PRV)

Compliant with ISO 26262 functional safety standard for greater reliability and robustness, accelerating autonomous and electrified driving

Comes with unique single button Park Release Valve (PRV) to improve control of trailer (un)coupling procedures, replacing conventional two-button PREVs

Scalable and customizable brain for all trailer types and fleet needs (Variants, 5V CAN, GIOs, etc.)

Intelligent 3-dimensional axis acceleration sensing for unparalleled trailer utilization monitoring & mounting flexibility

Superb space efficiency with 17% smaller volume and 29% less weight compared to previous generation

Evolutionary electric connection concept and modular cable portfolio to conveniently connect more devices faster

Flexible multi-voltage capability provides connectivity to all types of trucks (8 to 32 V) in different regions

Advanced pneumatic design speeds-up installation and serviceability with integrated components and simplified layout

New diagnostics software tool supporting touch screens and single-window concept for quick end-of-line tests





# iEBS

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### iEBS Basic Variants

ZF iEBS design includes lightweight composite material featuring an integrated pressure distribution module (PDM), anti-compounding and emergency function as well as an air suspension overflow valve (OVAS for basic air). It helps reduce the number of valves, piping and installation time and simplifies system layout and serviceability.

#### Basic Air for air suspended trailers



- PDM available with various fitting configurations
- Includes air suspension overflow valve (OVAS)
- Offers three Generic Input/Output (GIO) ports to support conventional air suspension valves such as trailer air suspension control (TASC), lift axle control valve (LACV) and a switch for manual activation

#### Basic Steel for leaf spring suspended trailers



- Brings Roll Stability Support (RSS) functionality to leaf spring suspended trailers whether fitted with height sensor or not
- Optional height sensor usage enhances the system with load sensing function
- Facilitates technology change from trailer ABS to trailer EBS to increase road safety when required

### ZF's Intelligent Trailer Program Compatible Functions

iEBS supports up to 40+ functions to optimize daily operations: At the Yard – On the Road – At the Dock

Advanced Safety					Operational Efficiency					
Anti-Lock Braking Function	Emergency Brake Alert	Router & Repeater	Bounce Control	Electronic Park Brake	OptiLevel™	Return-to-Load-Level	Memory Level	Brake Pad Wear Indicator*	SCALAR EVO Guard	SCALAR EVO Pulse
Rollover Stability Support	TailGUARD™	SafeStart	TiltAlert		8 - 32 V Advanced MultiVoltage	Operating Data Recorder	Notebook Memory	Extension Control	Battery Control	Immobilizer
							OptiLock	OptiTurn™	ServiceMind	OptiLink™

Driver Comfort & Effectiveness			Load Optimization			Fuel & CO <sub>2</sub> Reduction		
SmartBoard*	Return-to-Ride Level	Finisher Brake	Air Bellow Protector	OptiLoad™	OptiLevel™ 2-Point	Fuel Saving Suspension	OptiTire™	OptiFlow™ TrailerSkirt
Traction Help	Trailer Length	Steering Axle Lock	Overload Indicator	Forklift Control		OptiFlow™ AutoTail**	Lift Axle Control	OptiFlow™ Tail

iEBS Basic Steel enables up to 16 intelligent trailer functions **16**

iEBS Basic Air enables up to 19 intelligent trailer functions **16 + 3**

\* Functions for iEBS Basic variants that will be supported with the launch of iEBS Standard/Premium variants  
\*\* OptiFlow AutoTail upon product availability

### Subsystem Devices

#### SmartBoard\*

- Trailer control and operation pad
- Key trailer information
  - Air suspension & brake functions operation



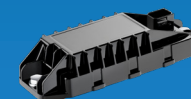
#### SCALAR EVO Pulse

- Trailer health monitoring telematics
- Real-time access to operational data
  - Optimize trailer maintenance and uptime



#### OptiTire™

- Tire Pressure Monitoring System
- Compliant with UN ECE-R 141
  - Covering different rim sizes for trailer, truck and bus



### Park Brake Control

#### Park Release Valve (PRV)

- Park Brake Control Valve for safe parking and trailer shunting
- Easy push/pull operation of park, drive and release functions
  - 50% less volume and 60% less weight compared with ZF's PREV



# Intelligent Trailer Braking Platform

Industry's first global trailer braking platform offers iABS and iEBS for intelligent trailers worldwide



The Intelligent Braking Platform is ZF's most advanced solution for global OEMs and local trailer specialists alike. Standardization and common components enable lean production and simplified warehousing. Multi-voltage capability and generic communication protocols improve vehicle connectivity, while scalable variants from basic iABS to premium iEBS are applicable to a wide variety of different trailer types worldwide.



For further product details contact your sales representative.  
For information about our product portfolio, visit: [zf.com/cv](https://zf.com/cv)  
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## About Us

ZF is a global technology company supplying systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains of Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility. With some 165,000 employees worldwide, ZF reported sales of €43.8 billion in fiscal 2022. The company operates 168 production locations in 32 countries.

ZF's Commercial Vehicle Solutions (CVS) division is helping shape the future of commercial transportation ecosystems. Our mission is to be the preferred global technology partner to the commercial vehicle industry. Powerfully combining ZF's commercial vehicle systems expertise, extensive technology portfolio and global operations, the division serves the full commercial vehicle industry value chain. As the automotive industry progresses towards an increasingly autonomous, connected, and electrified (ACE) future, ZF's CVS division innovates, integrates and supplies components and advanced control systems that help make commercial vehicles and fleets operate more safely and sustainably. CVS unites ZF's former Commercial Vehicle Technology and Commercial Vehicle Control Systems divisions, the latter being formed following ZF's acquisition of WABCO in Spring 2020.