

ZBV C-CLASS

MOBILE Z BACKSCATTER CARGO AND VEHICLE SCREENING SYSTEM

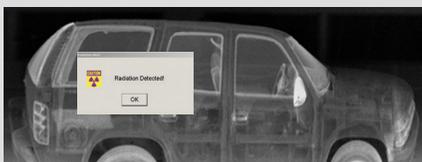
KEY FEATURES AND BENEFITS

- Backscatter imaging for photo-like images
- Easy to use
- High-throughput scanning
- Highly versatile with multiple operational modes



Low-cost, easy to use, and highly versatile, AS&E's ZBV® C-Class system is built into a standard delivery van and can screen vehicles, cargo containers, and other objects for threats and contraband simply by driving past them. The ZBV system's single-sided configuration and varied operating modes provide maximum maneuverability and flexibility for multiple applications, and it can be immediately deployed in response to security threats. With easy-to-interpret imaging for rapid analysis, the ZBV system enables high-throughput screening of vehicles and cargo.

The ZBV system employs Z Backscatter® technology for a photo-like image that reveals threats and contraband that transmission-only X-ray systems can miss. The ZBV system is ideal for screening vehicles for large quantities of concealed cigarettes, currency, drugs, explosives, and stowaways. It can also be equipped with the Tx-View™ option, which provides a dual-energy transmission image for enhanced detection of metallic threats, including weapons. With hundreds sold, the ZBV system is the top-selling, non-intrusive cargo and vehicle inspection solution in the world.



ZBV System Z Backscatter X-ray Images

TOP: Image shows hidden narcotics

MIDDLE: Image reveals smuggled alcohol, hidden to avoid paying duties

BOTTOM: Image accompanies a possible radioactive threat

SPECIFICATIONS

ZBV C-CLASS

OPERATING FEATURES

- **X-ray Source:** 225 keV
- **Penetration:** 7 mm (0.28 in) of steel at a distance of 1.5 m (5 ft) at scan speed of 1.5 kph (1 mph)
- **Scan Speeds (Operator Selectable):** 1.5, 5, and 10 kph (1, 3, and 6 mph)
- **Scan Field of View:** 3.6 m (12 ft) in height at 1.5 m (5 ft) from the side of the ZBV; or 4.3 m (14 ft) in height at 2.3 m (7.5 ft) to scan a hi-cube container

VEHICLE SPECIFICATIONS

- **Manufacturer:** Mercedes-Benz®
- **Model:** Sprinter CDI 4x2
- **Engine Type:** Determined by country homologation requirements
- **Right- or left-hand drive**
- **Fuel:** Diesel fuel runs vehicle and X-ray equipment generator. System uses two gallons of fuel per hour when scanning

Dimensions (without options)

- **Length:** 6.5 m (21 ft 4 in)
- **Width¹:** 2.4 m (8 ft)
- **Height²:** 2.8 m (9 ft 1 in)
- **Weight:** 4,452 kg (9,815 lbs)

¹ With mirrors extended

² To top of scanning lights

ENVIRONMENT

- **Operating Temperature:** 0 °C to 42 °C (32 °F to 108 °F)
- **Storage Temperature:** -29 °C to 60 °C (-20 °F to 140 °F)
- **Operable in:** Rain, snow, high winds, and altitudes up to 3,000 m (9,845 ft) nominally

HEALTH AND SAFETY

- **Radiation Dose:** The dose to the driver (in stationary scan mode) and to the cargo is less than 0.1 µSv (0.01 mR) per scan, at an average speed of 5 kph (3 mph) at 1.5 m (5 ft) distance
- **Radiation Dose to Crew:** 0.5 µSv in any one hour
- **Radiation Standard:** Conforms to ANSI N43.3-2008 for *General Radiation Safety Installations Using Non-Medical X-ray and Sealed Gamma-ray Sources, Energies Up to 10 MeV*

The performance characteristics and photos in this document are indicative and for information only and do not represent any specific system configuration. Specifications and features of individual systems will vary based upon customer requirements, operation, supplied options, and other factors. Customers must refer to the relevant quote, proposal, or contract for the definition of a system configuration, including specifications and optional items.

Due to continual development of our products, we reserve the right to amend any of the information listed here without notice. Please note that due to U.S. laws and regulations, not all products are available for sale in all countries without restriction.

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US Operations
829 Middlesex Turnpike
Billerica, MA 01821

UK Operations
Prospect Way
Victoria Business Park
Biddulph, Stoke-on-Trent ST8 7PL

Contact
Tel: +1.978.262.8700
Fax: +1.978.262.0533
rapiscan-ase.com/zbv

SYSTEM OPTIONS

- **Stationary Scan Mode:** Scans vehicles driven past parked ZBV; includes shore power (230 VAC +/- 10 VAC, 50/60 Hz, 80 amps, single phase)
- **Enhanced Stationary Scan Mode:** Automates scanning and traffic control and corrects image aspect ratio for varying vehicle speeds
- **Remote Operator's Console:** Console can be located up to 500 m from parked ZBV
- **Tx-View™ Trailer:** Provides a transmission image with material discrimination for enhanced detection of metallic threats; includes detectors, low-profile ramp, transport trailer, and image analysis tools
- **Reference Vehicle Compare:** Based on a user-defined vehicle identifier field, the system automatically compares current and historical scans of a vehicle and highlights any differences between the scans
- **Fusion Imaging™ Technology:** Utilizes key attributes of the transmission image to enhance the sharpness of the Z Backscatter image and improve detection capabilities
- **Scan Area Monitoring Kit:** For applications where vehicle occupants may be scanned; designed for compliance with ANSI 43.17-2009 for personnel scanning; monitors the scan area and stationary scan mode exclusion zone to prevent exposure above the specified limits
- **Integrated Peripheral Devices:** License/number plate recognition system and under-vehicle inspection system
- **Radioactive Threat Detection:** Automatically detects both gamma rays and neutrons
- **Isotope Identifier:** Digital, handheld, multi-channel spectrometer providing gamma and neutron isotope identification
- **MINI Z® System:** Handheld Z Backscatter system for auxiliary scanning (see separate data sheet); includes storage location and charging station for scanner batteries and tablet computer
- **Wireless Networking Kit:** Provides interconnected remote image analysis and supervisor stations
- **Hot Weather Package:** Guarantees operation up to 50 °C (122 °F)
- **Cold Weather Package:** Guarantees operation down to -25 °C (-13 °F)
- **Harsh Environment:** Includes hot and cold weather packages

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