

# ***Utility Vehicles and Vans (4x2) and (4x4) Vito***

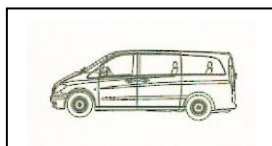
## ***Vans for Defence***



Mercedes-Benz 115 CDI in service with the German Armed Forces (Bundeswehr)



Mercedes-Benz



# Utility Vehicles and Vans

## Model Vito (4x2) and (4x4)

Vehicle Type	Payload	Wheelbase (mm)	Type	Engine Output EURO IV	Mx. Torque
108 CDI (4x2)	0.8 to	3,000	R4	60-90 kW / 82-122 hp	200-300 Nm
111 CDI (4x4)	up to 1.1 to	3,200 / 3,430	R4	80 kW / 109 hp	290 Nm
115 CDI (4x4)	up to 1.1 to	3,200 / 3,430	R4	110 kW / 150 hp	330 Nm

### Background

**Vito**, **Sprinter** and **Vario** make up the Mercedes-Benz van series, with GVW of between 2.6 and 7.5 tonnes. Designed for second-line short-range transport duties, crew transport or for Military Police (MP) applications the new vans offer much in performance and comfort.

The light utility vehicle and van Model Vito of the new V-Class, is the youngest member of the Mercedes-Benz van range. Nevertheless, the Vito stands out of his earlier cousins with his comprehensive standard safety features. A trial driving presentation took place in the south of Spain on 16 October 1995 and the Vito vans were launched for the German market in 1996. Unveiled during the Geneva Commercial Vehicle Motor Show conducted from 11 to 21 January 1996 the Vito was immediately named "Van of the Year 1996". Produced as a panel van and crewbus at the Spanish Vitoria plant the Vito replaced the Mercedes-Benz 100 D. Criticised because of the inferior comfort the Vito's functionality and practical design laid the foundation for a new and successful generation of Mercedes-Benz vans. Meanwhile the Vito has found its customers within the military forces of several countries as well. Safety, economic and performance characteristics make the Vito the preferred choice for the military. The Vito is widely employed for rear-echelon roles or second-line duties and is in service for governmental organisations, aid agencies and the United Nations (UN).

### Technical Description

The layout of the Mercedes-Benz Vito follows the classic bus-like design of vans and utility vehicles including the vast variety of body modifications to fit platforms or small shelter bodies. This remarkable van boasts a cargo space of up to 5.7 m<sup>3</sup>, a rear entry width of 1,277 mm, a wide side sliding door and an innovative load securement system. All these features guarantee its utility for a wide range of applications that are also relevant in military service. Internal designation is New Cargo Vehicle 2 (NCV 2).

The front-driven Mercedes-Benz **Vito 108** (4x2) with a wheelbase of 3,000 mm can be used as a carrier for a crew of up to nine, as a panel van or as ambulance, and in military service the Mercedes-Benz Vito 108 is often seen as a Military Police (MP) vehicle. Powered by a OM 611 DE22 A / LA 4-cylinder in-line Common Rail Direct Injection (CDI) diesel engine the vehicle has an output of either 60 kW (82 hp), 75 kW (102 hp), or 90 kW (122 hp) at 1,500-2,400, 1,600-2,400 or 1,800-2,500 rpm, respectively. Displacement is 2,151 ccm. Petrol engine versions with an output of 95 kW (129 hp) or 105 kW (143 hp) are also available. Two types of transmission can be fitted, either a manual 5-speed GTO28-5/4.25-0.79 or an automatic 4-speed 4-HP 20.



Mercedes-Benz Vito (4x2) 108 CDI in service with the German Armed Forces (Bundeswehr). Such coloured examples are used regularly during training exercises and are concealed behind camouflage nets under tactical scenarios.

The Mercedes-Benz series 638 included the Vito 108, 111, and 113, while the follow-on series 639 consists of the new Vito 109, 111, and 115, also available in (4x4) configuration since 2006. The German Armed Forces have received (4x4) pre-series vehicles of the former so far. Part of the 639 series are also the commercial-only Viano vans.



The permanent all-wheel drive of the later models Mercedes-Benz **Vito 111** and **Vito 115** ensures control and traction in all situations especially on wet and slippery surfaces through a ESP / 4ETS® system. If one of the wheels loses grip, ESP / 4ETS® divides the power amongst the other wheels to regain control immediately. The Electronic Stability Program (ESP®) represents just one of the dynamic control systems helping to avoid accidents and is an additional safety measure against rough handling. Additionally a strong passive safety concept, e.g. airbags, provides an optimum of protection for all passengers.



Mercedes-Benz Vito 108 CDI. With a GVW of 2,700 kg the payload can be up to 800 kg.



Mercedes-Benz Vito 108 with canine systems trailer of WT Metall GmbH & Co. KG. The dog-handling service of the German Armed Forces is mostly equipped with Mercedes-Benz Vito 108 vans.

Utility Vehicles and Vans Model 111 CDI Vito (4x4)		
<b>Model</b>	<b>Ausführung</b>	Utility Vehicle and Van
Type	Typ	111 CDI Vito
Manufacturer	Hersteller	Mercedes-Benz / DaimlerChrysler AG, Department VL/FR – HPC 161 D-76742 Woerth, Germany
Introduction into service	Einführung	1996
Cab seating	Sitzplätze Fahrerhaus	1 + 1
Seats (rear)	Sitzplätze (hinten)	n/a
Configuration	Antriebsformel	4 x 4
<b>Weight</b>	<b>Gewicht</b>	
Weight empty chassis	Militärisches Leergewicht	n/a
Weight loaded, road (GVW)	zulässiges Gesamtgewicht	2,770 (optional 2,940 kg)

Weight on front axle (loaded)		n/a
Weight on rear axle (loaded)		n/a
Payload	Nutzlast	1,100 kg
Max. load (road)	außergewöhnliche Belastung (Straße)	n/a
Max. load (cross-country)	außergewöhnliche Belastung (Gelände)	n/a
Towed load (road)	zulässige Anhängelast (Straße)	n/a
Towed load (cross-country)	zulässige Anhängelast (Gelände)	n/a
Load area	Ladefläche	n/a
Length (wheelbase 3,250 mm)	Länge (Radstand 3.250 mm)	n/a
Width	Breite	n/a
Height (cab)	Höhe Fahrerhaus	n/a
Height (chassis, front)	Höhe (Chassis vorne)	n/a
Height (chassis, rear)	Höhe (Chassis hinten)	n/a
Body	Koffer	n/a
Height (load area)	Ladehöhe über Boden	n/a
Ground clearance	Bodenfreiheit	n/a
Track (front)	Spurweite (vorne)	n/a
Track (rear)	Spurweite (hinten)	n/a
Wheelbase	Radstand	3,200 / 3,430 mm
Angle of approach	Böschungswinkel vorne	n/a
Angle of departure	Böschungswinkel hinten	n/a
Chassis frame	Rahmen	n/a
Max speed (road)	Höchstgeschwindigkeit	n/a
Min speed (road)	Mindestgeschwindigkeit	n/a
Range	Fahrbereich (Straße)	n/a
Fuel capacity	Kraftstoff-Vorrat	75 ltr.
Fuel consumption	Kraftstoff-Verbrauch	n/a
Gradient	Steigfähigkeit	n/a
Side slope	Querneigung, Kippgrenze	n/a
Fording (standard)	Wattfähigkeit (ohne Watsatz)	n/a
<b>Engine</b>	<b>Motor</b>	4 cylinder in-line or Common Rail Direct Injection (CDI) diesel engine
Designation	Bezeichnung	OM 904 LA
Bore x Stroke	Bohrung x Hub (mm)	n/a
Displacement	Hubraum (ccm)	2,148 ccm
Output	Leistung KW (PS)/min <sup>-1</sup>	80 (109) or 110 (150)
Torque, max.	Drehmoment (Nm / kpm)	290 Nm up to 330
Cooling	Kühlung	n/a
Power transfer	Kraftübertragung	n/a
Transmission	Getriebe	Mechanical, 6-speed, automatic 5-speed (optional)
Steering	Lenkung	n/a
Turning circle (short and long wheelbase)	Wendekreis	n/a
Axle, front	Vorderachse	McPherson axle with stabiliser
Axle, rear	Hinterachse	n/a
Suspension (front)	Radaufhängung (vorne)	coil springs, 1.55 to
Suspension (rear)	Radaufhängung (hinten)	Semi-trailing arm coil spring, 1.55 to, Rear wheel drive, i = 3.455 / 3.727 (gearbox / automatic)
Tyres	Bereifung	n/a
Brake (main)	Betriebsbremse	Dual circuit, 4 disc brakes; Electronic Stability Programme (ESP®) with ABS, Acceleration-Skid-Control (ASC), Brake Assist (BAS) and Electronic Brake Sprinter
Brake (parking)	Feststellbremse / Handbremse	mechanical
Brake (engine)	Motorbremse	n/a
Electrical system	Fahrzeugelektrik	n/a
Alternator (reinforced)	Wandler	n/a
Starter motor	Startereinrichtung	n/a
Batteries	Batterien	n/a
Trailer socket type	Anhängeranschluß	n/a
Trailer couplings (optional)	Anhängerkupplung	n/a

The Mercedes-Benz Vito (4x4) 111 CDI with a wheelbase of 3,200 mm is part of the 639 series of vehicles made by Mercedes-Benz. This versatile vehicle is powered by a OM 904 LA 4 cylinder in-line or Common Rail Direct Injection (CDI) diesel engine developing 80 kW (109 hp) or 110 kW (150 hp). Displacement is 2,148 ccm. While a mechanical 6-speed transmission is standard, an automatic 5-speed one is offered as an option.



Mercedes-Benz DC Vito (4x2) 111 CDI Feldjäger (Military Police) with 3,200 mm wheelbase. The 4-cylinder engine develops 80 kW (109 hp). Displacement is 2,148 ccm. All markings are fitted on as foils and can be removed easily to sell the vehicle on the private market after a defined amount of kilometres has been reached.



Note the writing on the rear door ([www.bwfuhrpark.de](http://www.bwfuhrpark.de)), a reminder that the van has been leased by the German Armed Forces through the new vehicle management system.





Mercedes-Benz DC Vito (4x2) 115 CDI Feldjäger (Military Police). The 4-cylinder engine develops 110 kW (150 hp) at 1,800 to 2,400 rpm. Maximum speed is 180 km/h on roads with canine systems trailer type Bamberg with two boxes for the transport of dogs. Empty weight is 2,380 kg.



Mercedes-Benz DC Vito (4x4) 115 CDI Feldjäger (Military Police). This vehicle with a wheelbase of 3,200 mm is not naturally olive and the military look can be removed easily. The 4-cylinder engine develops 110 kW (150 hp) at 1,800 to 2,400 rpm. Displacement is 2,148 cc. Empty weight is 2,380 kg. Special equipment includes: double-flash special emergency-light type DBS 2000/3000 (12/24 V), horn, antenna mount, information panel at the rear to stop vehicles for inspection, microphone and outboard loudspeaker installation, Mag-Lite flash-lights for driver and co-driver, telephone installation for hands-off communication, air conditioning, heater, rifle racks for G-36 assault rifles, and radio system FuG SEM 80.

### **Sales and Service Entry**

The Mercedes-Benz Vito is in service with the armed forces of Germany. Commercial variants of the Vito are manufactured in Spain and in Poland at the Jelcz plant, near Wrocław (Breslau).