

Limousine "DIPLOMAT"

Discreetly armored premium class

limousine based on

Mercedes-Benz S450/500L V223



VPS





18

S 450

VPS



VPS



VPS



VPS

VPS “DIPLOMAT”

VPS proudly announces a new discreetly armored version of premium class limousine called DIPLOMAT based on all-new Mercedes-Benz S450/500 V223 4Matic in CEN B4

The S-Class stands for the fascination of Mercedes-Benz: legendary and traditional engineering expertise defines the luxury segment in the automobile industry. The new S-Class can be experienced with all the senses – seeing, feeling, hearing and smelling – while offering numerous innovations in the areas of driver assistance, protection and interaction. Mercedes-Benz is shaping the next generation of individual mobility for our times with innovations that place the focus on people. The new S-Class uses digitization for a car that responds empathetically to the needs and wishes of its driver and passengers.

Sometimes numbers say more than a thousand words!

□The turning circle is reduced by up to 2 metres with rear-axle steering compared to a model without it.

□The maximum steering angle is 10°.

27 languages are supported by "Hey Mercedes" with Natural Language Understanding (NLU).

□31 loudspeakers and eight exciters are included in the Burmester® high-end 4D surround sound system.

□Comfort on the front passenger seat is assisted by up to 19 motors (8 for adjustments, 4 for massage and 5 for ventilation, one for the lumbar support and one to move the monitor on the reverse).

- ❑ 10 different massage programmes are available in the new S-Class.
- ❑ The plug-in hybrid variant of the S-Class will have an electric range of up to 100 kilometers.
- ❑ The display area of the augmented reality head-up display corresponds to a monitor with a diagonal of 77 inches.
- ❑ The boot capacity has increased by 20 litres to up to 550 litres compared to the previous model.
- ❑ With a C_d figure from 0.22,^[1] the S-Class is one of the world's most aerodynamic cars. Its drag coefficient is therefore lower than before, despite a larger frontal area 200 sq. cm.
- ❑ Compared to the preceding model, elbow-room for the driver has increased by 38 millimeters and by up to 23 millimeters for rear passengers. Headroom in the rear has increased by up to 16 millimeters.
- ❑ The resolution of DIGITAL LIGHT per vehicle is over 2.6 million pixels.
- ❑ The computing power of MBUX (Mercedes-Benz User Experience) has increased by 50 percent compared to the system in the previous model. The memory bandwidth is 41,790 MB/s.
- ❑ When a side impact threatens, the vehicle body can be raised by up to 8 centimetres by the E-ACTIVE BODY CONTROL suspension (optional) within a few tenths of a second.
This is a new function of PRE-SAFE® Impulse Side:
17 step motors control the temperature and air distribution in the Thermotronic system.
- ❑ The 4-zone climate control Thermotronic Rear even has 20 step motors. These electric motors operate the air flaps.

□ In the Active Ambience Lighting system, there is an LED in an optical fibre every 1.6 centimeters.

There are around 250 in all.

□ The new OLED central display measures 239.06 mm x 218.8 mm, and has an active screen diagonal of 12.8 inches. The screen area is 64 percent larger than in the preceding model. The driver display measures 291.6 mm x 109.4 mm and has a diagonal of 12.3 inches.

□ The tubular structure of the innovative rear airbag is around 16 litres, while the total volume of the deployed bag is up to 70 litres.

□ The control units of E-ACTIVE BODY CONTROL analyse the driving situation and adjust the suspension 1000 times per second.

□ The designation "S-Class" was officially introduced with the 116 series in 1972. More than 98 kg of components made from resource-conserving materials are used in the S-Class. The number of components containing recyclates is now 120 – more than twice as many as in the preceding model. Another 40 kg or so are made from renewable raw materials.

□ W/V223 is the internal designation of the new model series.

□ The new tool used to micro-perforate the seats operates with 16,000 needles.

This executive discreetly armored limousine now and you will get a combination of exclusivity and reliable protection in one product!. This limousine will be built on base of on all-new Mercedes—Benz S450/500 V223 4Matic in B4 level protection in accordance with European standards 1999 CEN FB 1063 and CEN BR 1522/1523.

ARMORING PACKAGE B4

Ballistic glazing:

- Front, back and 6 side windows, thickness \pm 21-23mm**
- All windows are developed, engineered and manufactured according to standards**
- All windows are tinted except front doors and windshield**
- All side windows will have the steel-glass solution to give them maximum safety**
- Tungsten heating integrated into windshield and rear glass**
- All windows are mounted and fixed**

Ballistic steel and lightweight composite materials:

- 4 doors with an additional structural reinforcement inside the doors**
- Steel firewall between engine compartment and passenger compartment**
- Steel bulkhead between passenger compartment and trunk**
- Rear quarters from roof till bottom**
- Rear wheel wells (arches)**
- A, B,C and D pillars from roof till bottom**
- The overlaps between the armor plates are made from steel**
- Fuel tank protection**
- Battery and EMC protection**
- Run-Flat tyre system**
- Fire-extinguisher for engine compartment**
- Intercom communication system from driver side**

Extra options included into armoring package:

- Front and rear door window are operable as far as technically possible minimum of 18cm**

- Anti-fragmentation floor protection class 1 against 1 x DM51 hand grenade
 - Electronics, lots are possible up on request. Blue lights intercom siren etc.
- Other extra options: on request
- NOTE: Roof without sunroof and without panoramic roof due to the armoring**



B4 level protection is against .357 Magnum (9×33mmR) / .44 Remington Magnum (10.9×33mmR)

	Test Level VPAM APR 2006	Application for		For comparison		Type of Weapon	Cartridges	Information about Test Ammunition				Extracts taken from test Conditions		
		VPAM_PM2007 VPAM BRV 2009 VPAM BSW 2006 VPAM HVN 2009		DIN EN 1063 (BR) DIN EN 1522/23 (FB) VPAM BRV 1999 (VR) STANAG 4569 AEP55 (Level)			Calibre	Type of bullet	Mass (g) Hardness (HRC)	Manufacturer /Type	Shot Distance* (m)	Bullet Velocity (m/s)	Bullet Energy (joule)	
Hand Gun Protection	1	PM1 VR1	BSW 1 HVN 1	BR 1 FB 1 VR 1 (BRV 1999)				22 Long Rifle	L/RN	2,60 ± 0,1	Winchester	10 + 0,5	360 ± 10	168
	2	PM2 VR2	FSW 2 HVN 2					9mm Luger ⁵⁾	FMJ/RN/S C Tinned	8,00 ± 0,1	DAG DM 41	5 + 0,5	360 ± 10	518
	3	PM3 VR3	FSW 3 HVN 3	BR 2 FB 2 VR 2 (BRV 1999)				9mm Luger ⁵⁾	FMJ/RN/S C Tinned	8,00 ± 0,1	DAG DM 41	5 + 0,5	415 ± 10	689
	4 ¹⁾	PM4 VR4	BSW 4 HVN 4	BR 3 FB 3 VR 3 (BRV 1999)				.357 Magnum	FMJ/CB/S C	10,20 ± 0,1	Geco	5 + 0,5	430 ± 10	943
				BR 4 FB 4 VR 4 (BRV 1999)				.44 Rem. Mag.	FMJ*/FN/S C	15,60 ± 0,1	Speer	5 + 0,5	440 ± 10	151
5	PM5 VR5	BSW 5 HVN 5					.357 Magnum	FMs/CB	7,10 ± 0,1	DAG Special	5 + 0,5	580 ± 10	1194	
Assault Rifle Protection	6	PM6 VR6	BSW 6 HVN 6	B4+				7,62 x 39	FMJ/PB/F eC	8,0 ± 0,1 core 3,60	M 43 P5	5 + 0,5	720 ± 10	2074
	7	PM7 VR7	BSW 7 HVN 7	BR 5 FB 5 VR 5 (BRV 1999) BR 6 FB 6 VR 6 (BRV 1999)	Stanag Level 1 when in addition 5,56 x 45 mm (Typ: M193)			.223 Rem ²⁾ (5,56 x 45)	FMJ/PB/S CP	4,0 ± 0,1	MEN SS 109	10 + 0,5	950 ± 10	1805
								.308 Win (7,62 x 51)	FMJ/PB/S C	9,55 ± 0,1	MEN DM 111	10 + 0,5	830 ± 10	3289
Armor Piercing	8	PM8 VR8	BSW 8 HVN 8		Stanag Level 2			7,62 x 39	FMJ/PB/H CI	7,70 ± 0,1 core 4,10 hardness 65	API BZ	10 + 0,5	740 ± 10	2108
	9	PM9 VR9	BSW 9 HVN 9	BR 7 FB 7 VR 7 (BRV 1999)				.308 Win ³⁾ (7,62 x 51)	FMJ/PB/H C	9,70 ± 0,2 core 4,0 ± 0,1 hardness 62 ± 2	MEN/CBC FNB, P 80	10 + 0,5	820 ± 10	3261
	10	PM10 VR10	BSW 10 HVN 10		Stanag Level 3			7,52 x 54 R	FMJ/PB/H CI	10,40 ± 0,1 core 5,30 hardness 63	B 32	10 + 0,5	860 ± 10	3846

*)The standards DIN EN 1063 (special glazing in civil engineering)and DIN AN1522/23 Windows and doors as well as STANAG 4569 AEP 55 and VPAM BRV 1999 are listed for comparison. Requirements and test conditions partly differ from VPAM.

**) When necessary regarding velocity of the bullet, oscillation and impact point, the shot distance can be adjusted in the test 1-12.

FMJ full metal jacket (steel)
FMJ* (copper) full metal jacket (copper)
CB coned bullet
RN round nose
PB pointed bullet
FN flat nose
L full lead
SC lead-soft core
FEC mild-steel core

HC hard core
WC wolfram-carbide (tungsten)
FMs full brass
I incendiary
C.I.P. small arms Permanent international commission for the testing of
TDCC Dimension sheets of the C.I.P.
DAG RUAG Ammotec, Germany
Geco RUAG Ammotec, Germany
MEN Metallwerk Eisenhuetfte Nassau, Germany

FNB FN Herstal, Belgium
Speer USA Federal Cartridge Company, USA
1) In these steps both calibres are to use
2) Twist rates 178 mm ± 5%
3) Twist rates 254 mm ± 5%
4) Twists rates arbitrary
5) Test barrel with a transition of 7,5mm
6) Arbitrary shot distance, Appropriate hits have to be ensured in terms of velocity, oscillation and impact point