

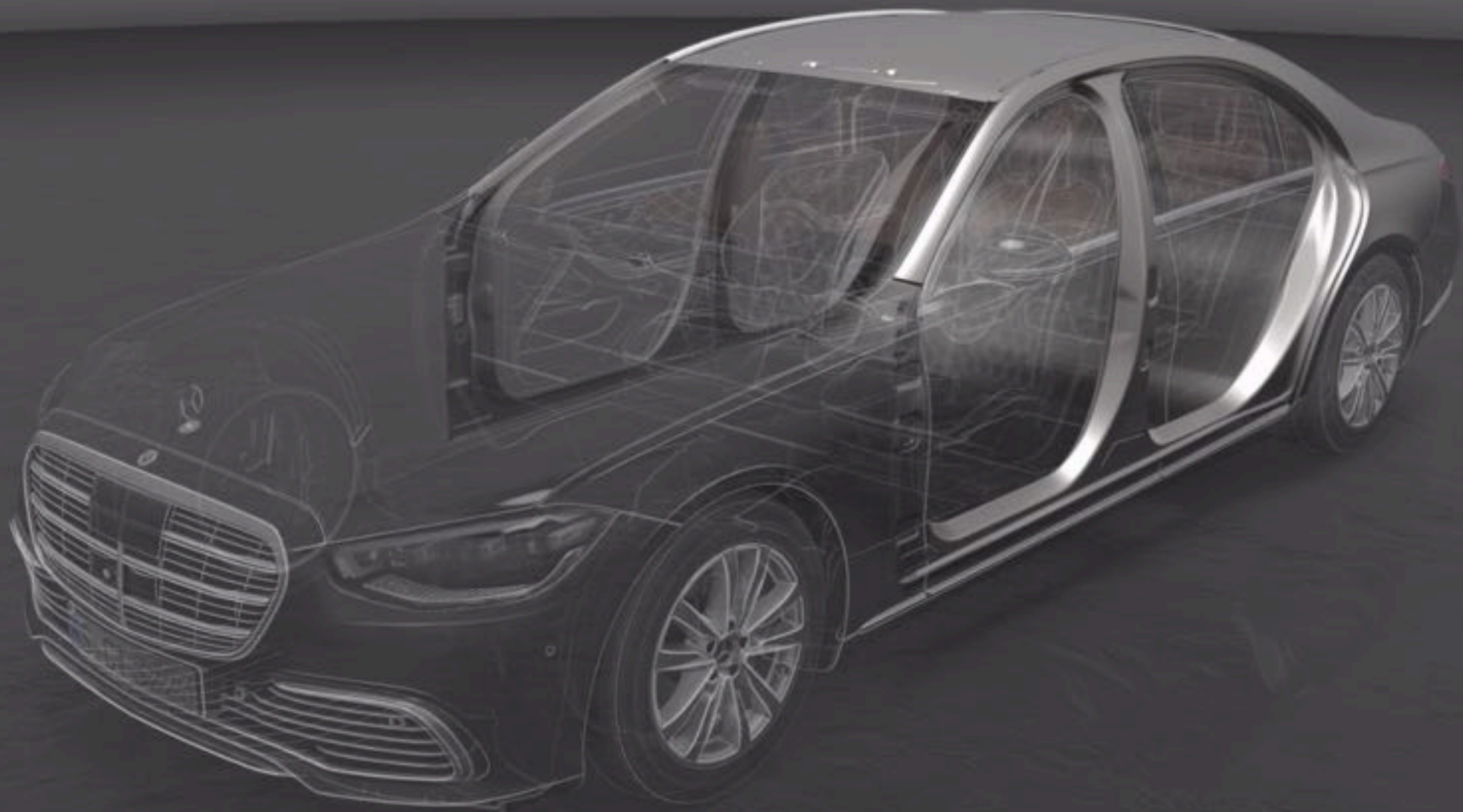
# Armoring vision

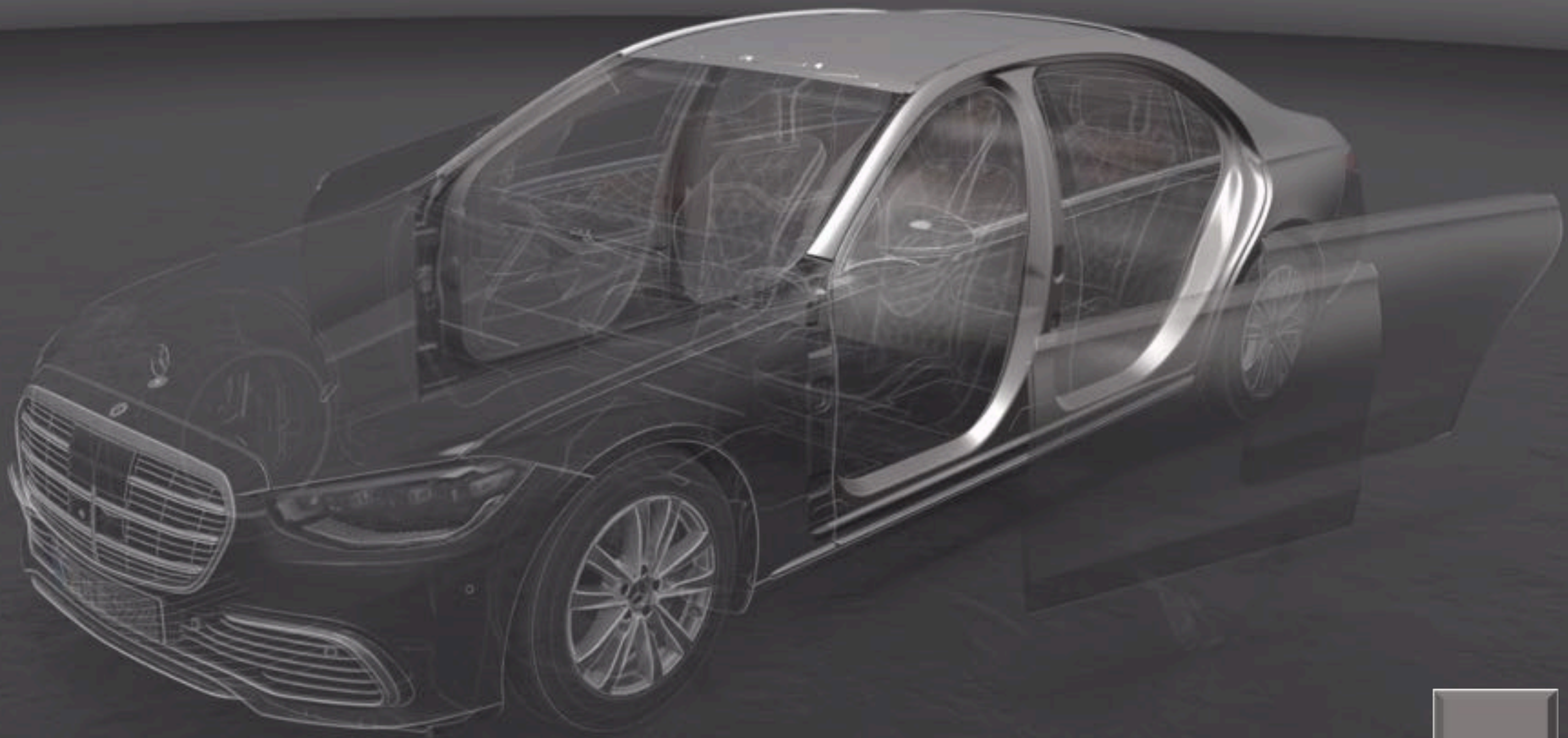
The logo features the words "Mercedes-Benz" in a smaller, sans-serif font above the word "GUARD" in a much larger, bold, serif font. Both are rendered in a 3D, metallic silver style with a slight shadow. The text is centered within a white, stylized outline of a car's roofline, which is also rendered in a 3D, metallic silver style.

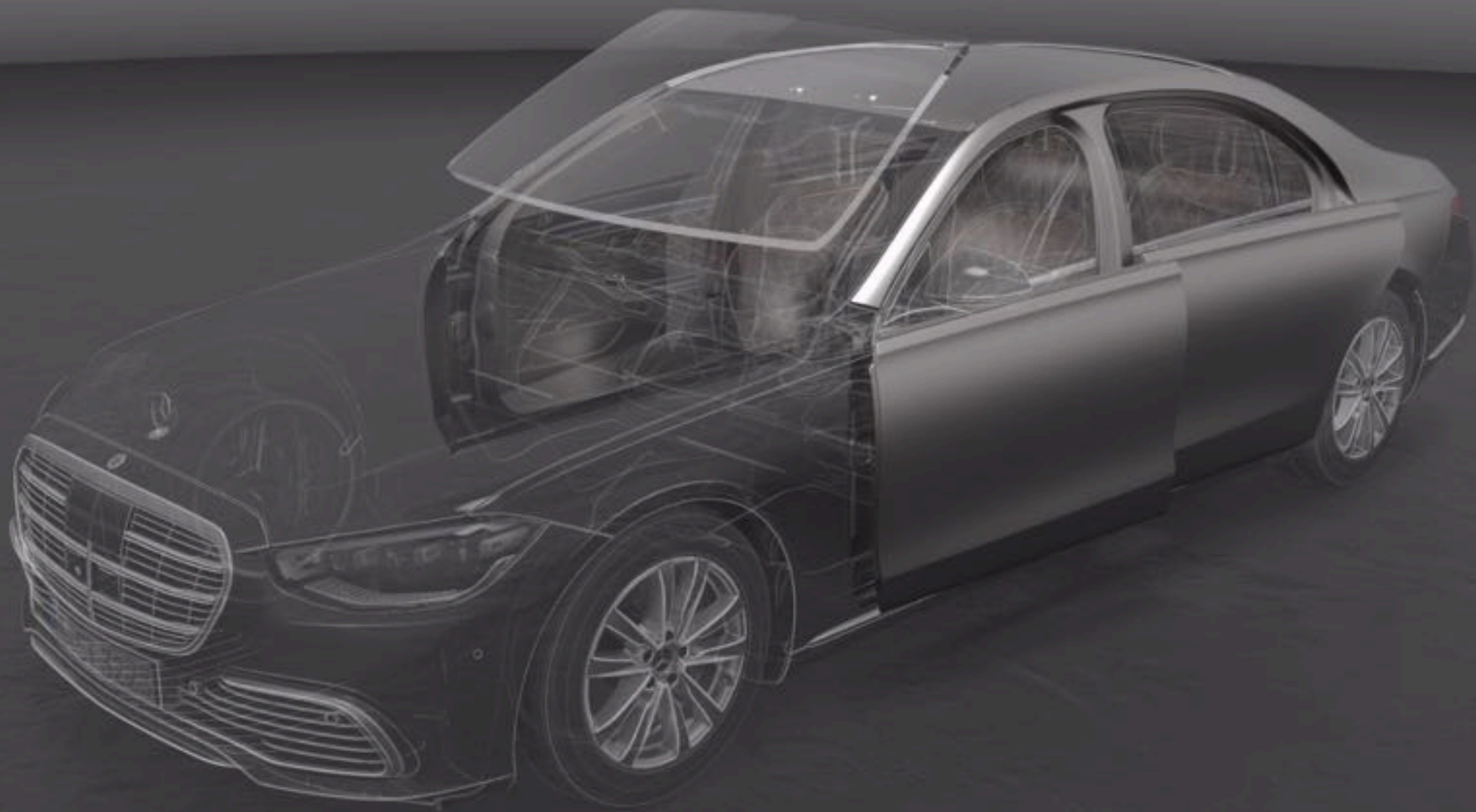
Mercedes-Benz  
GUARD

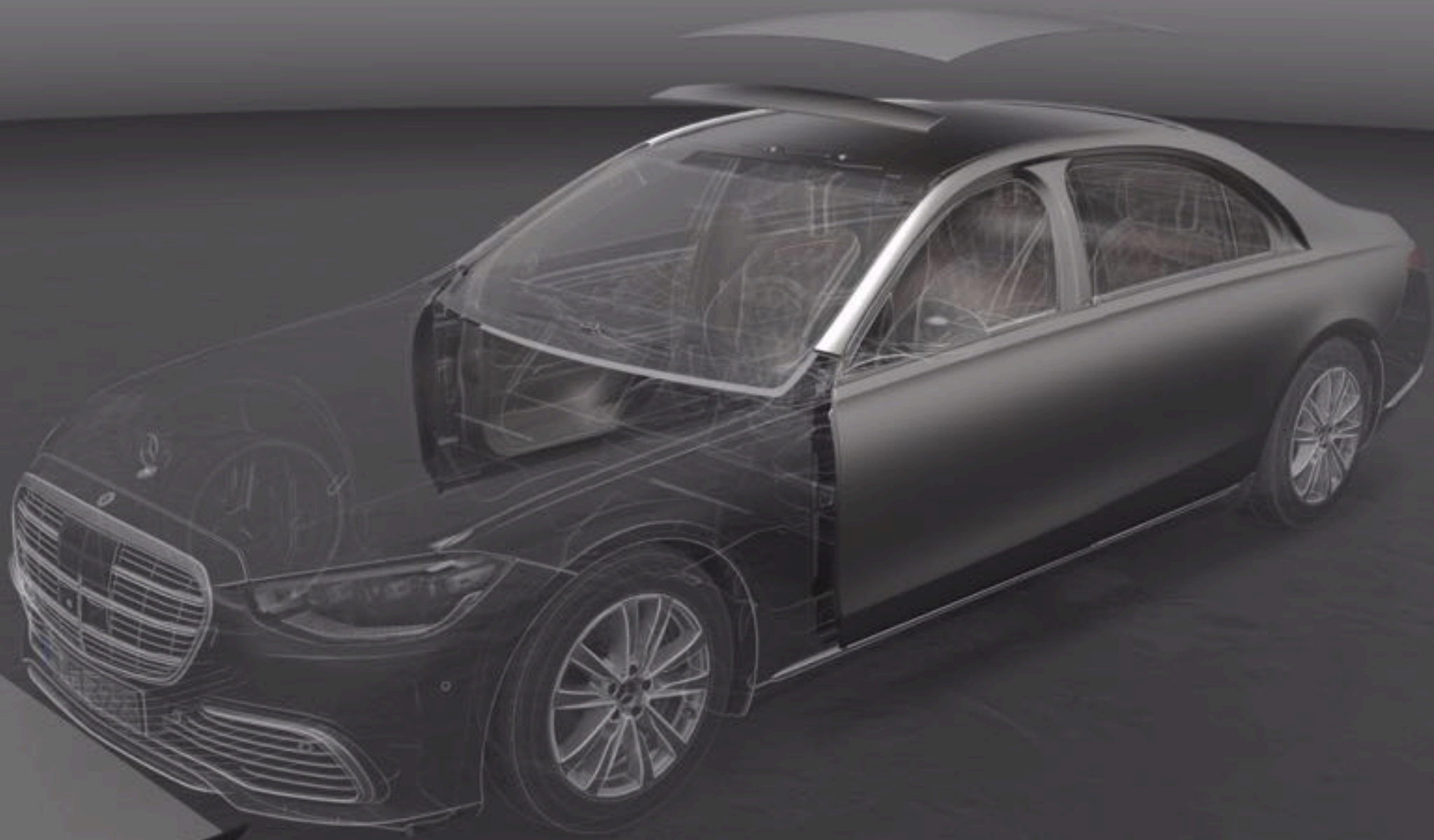
Mercedes-Benz S680 V223 4Matic Guard VR10

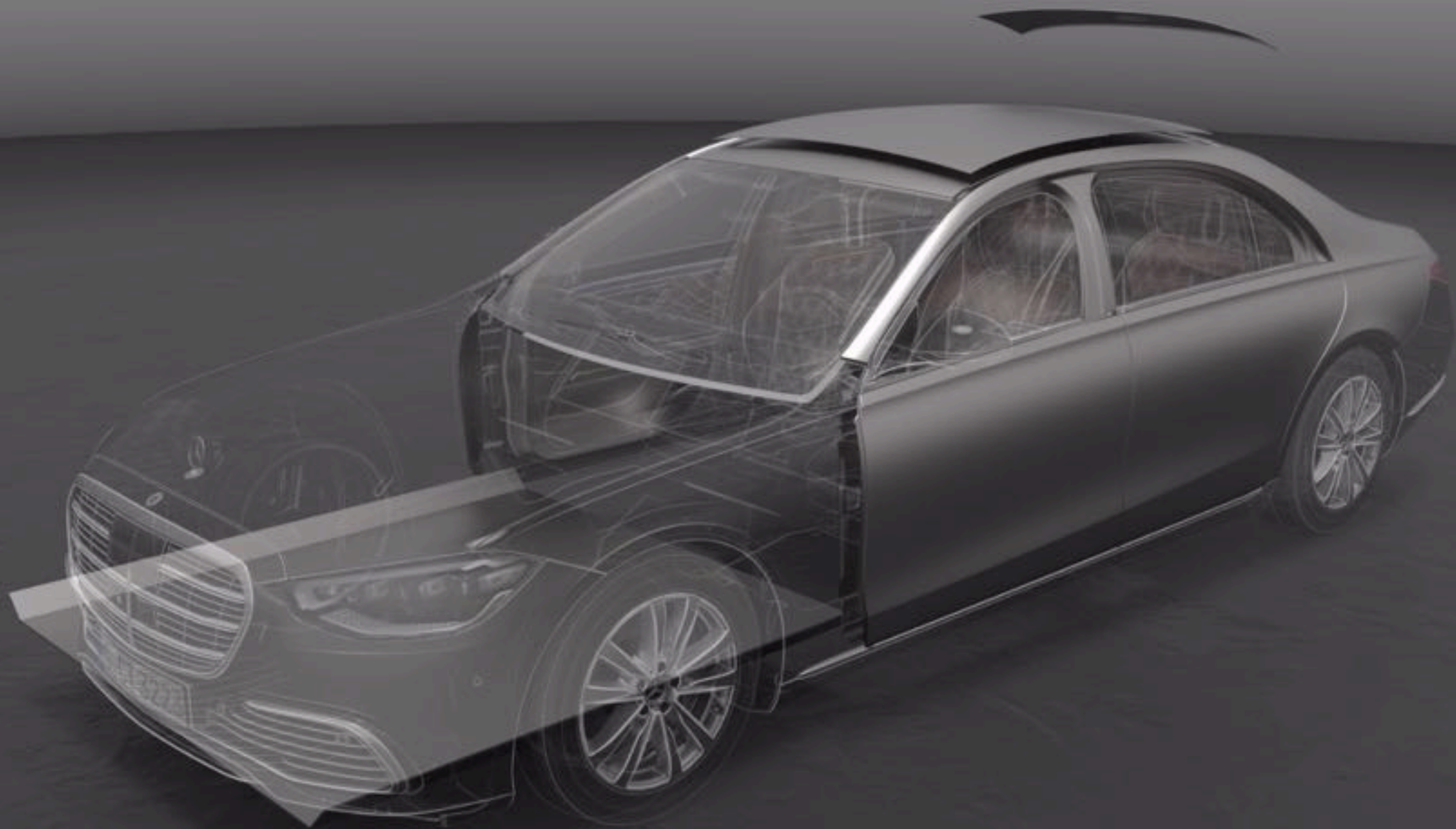


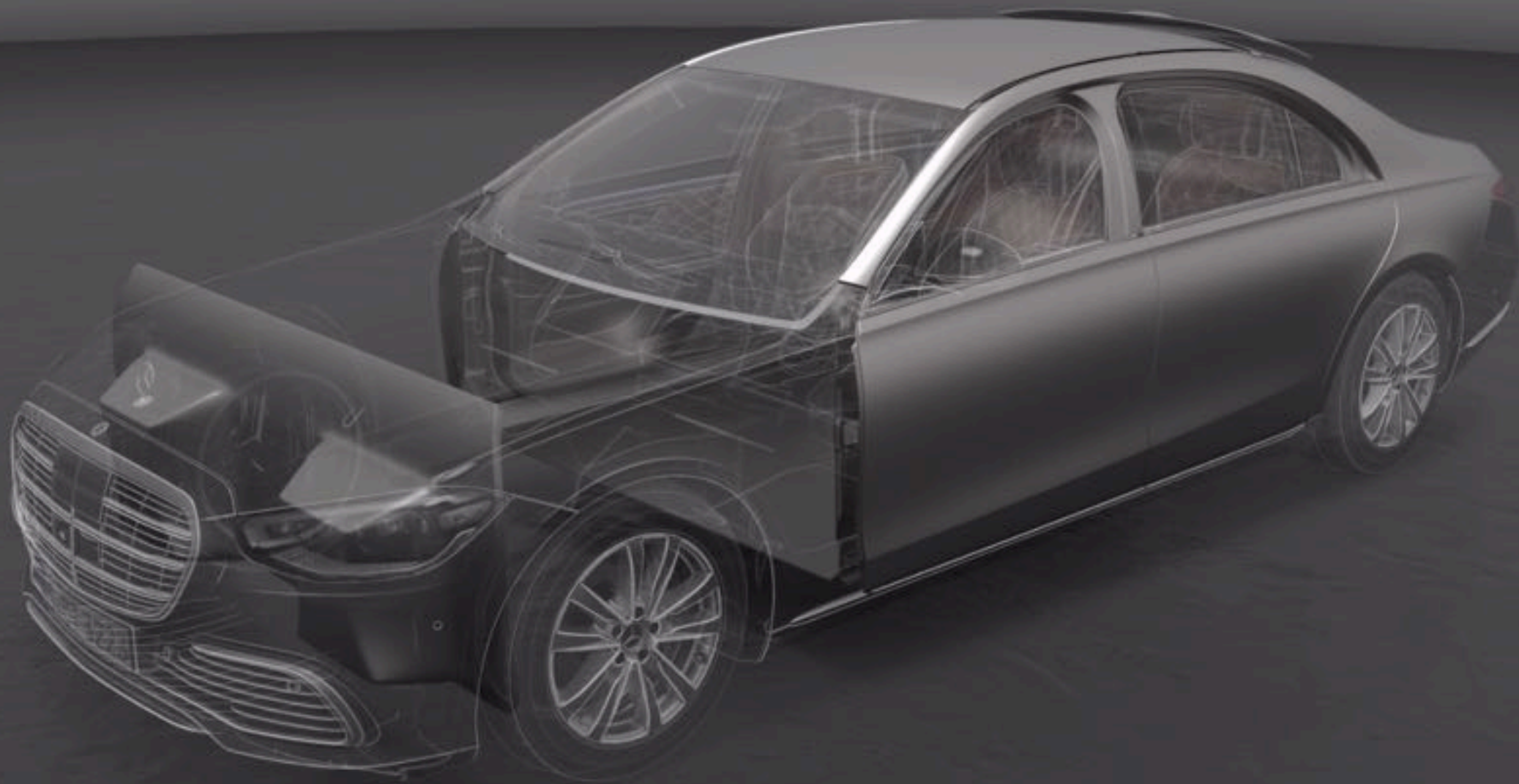




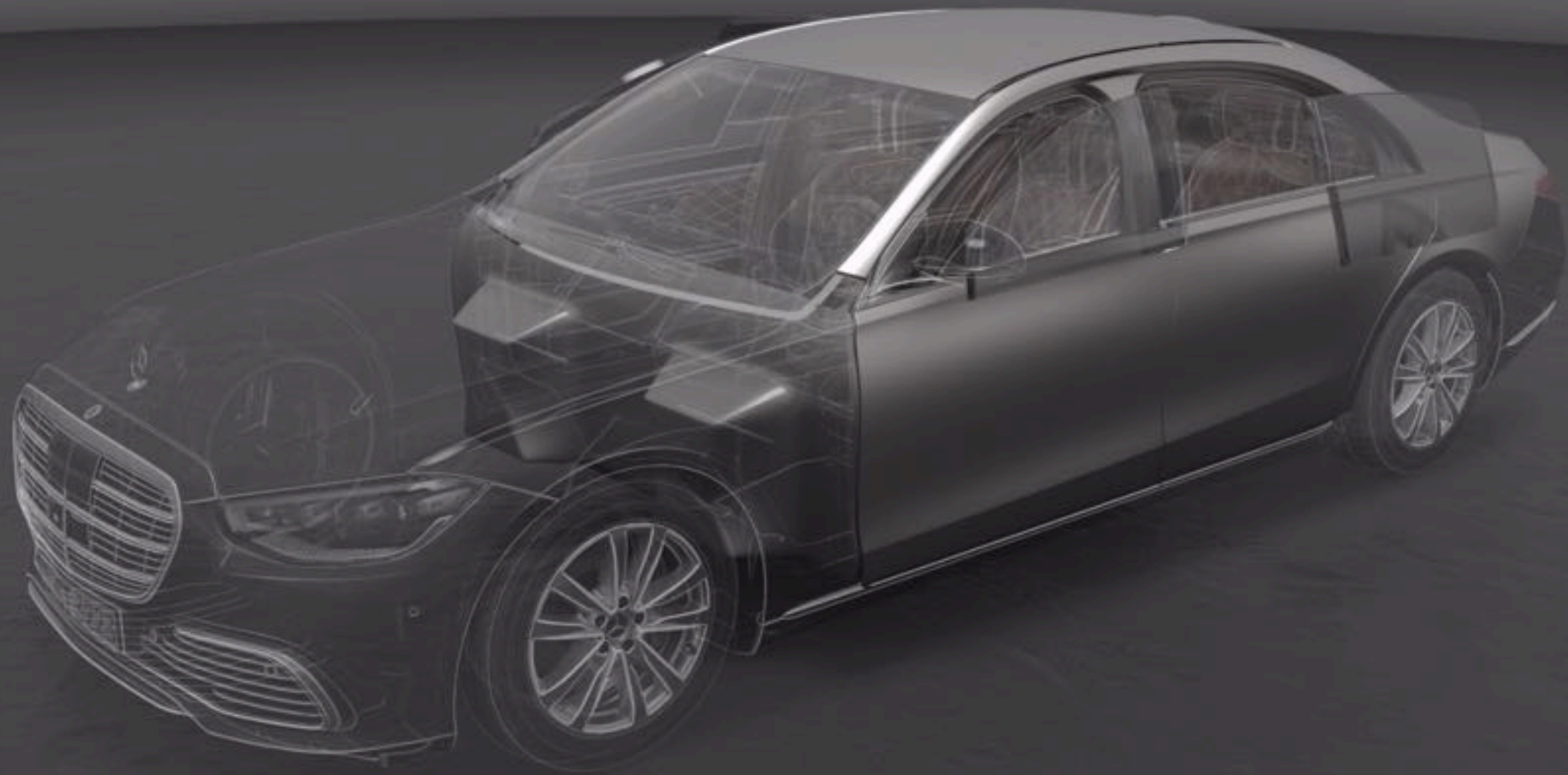


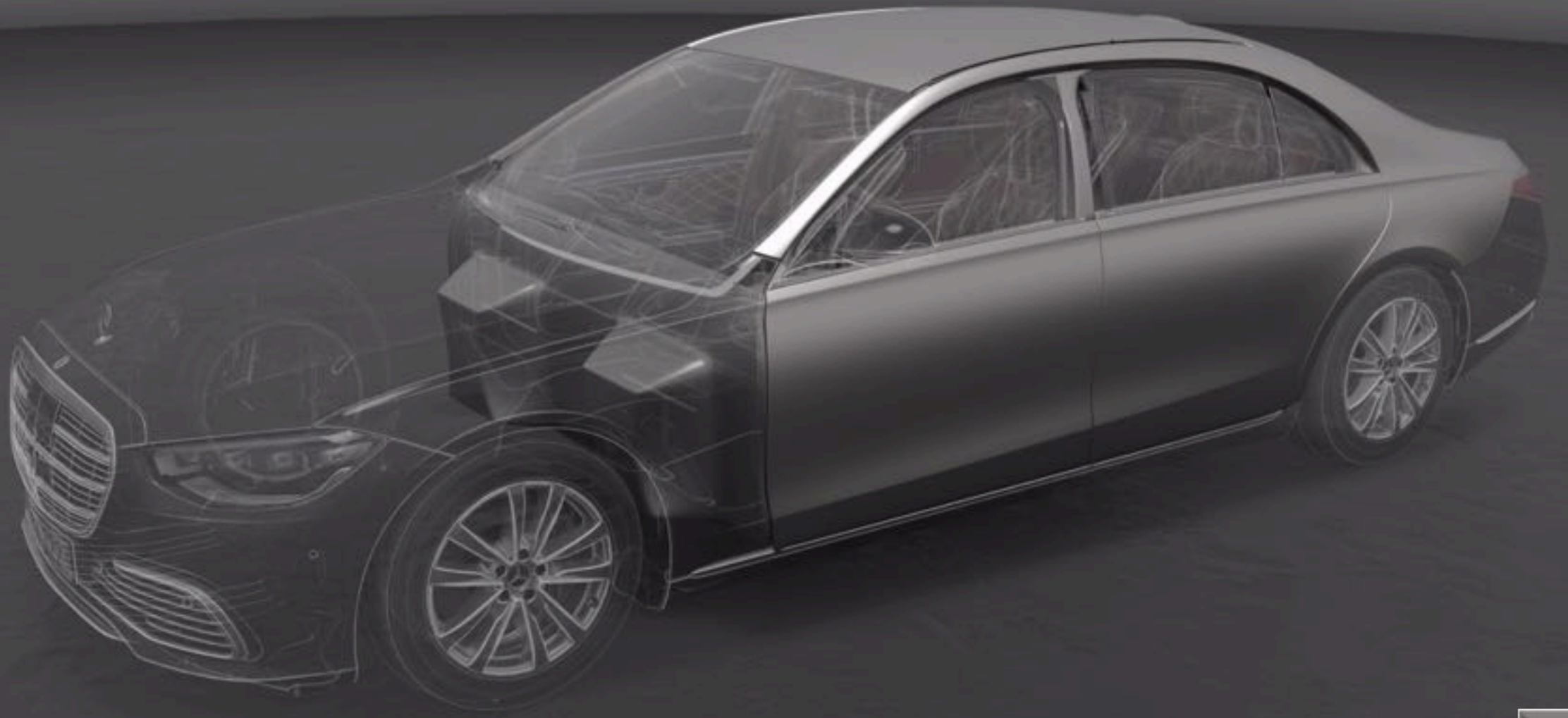




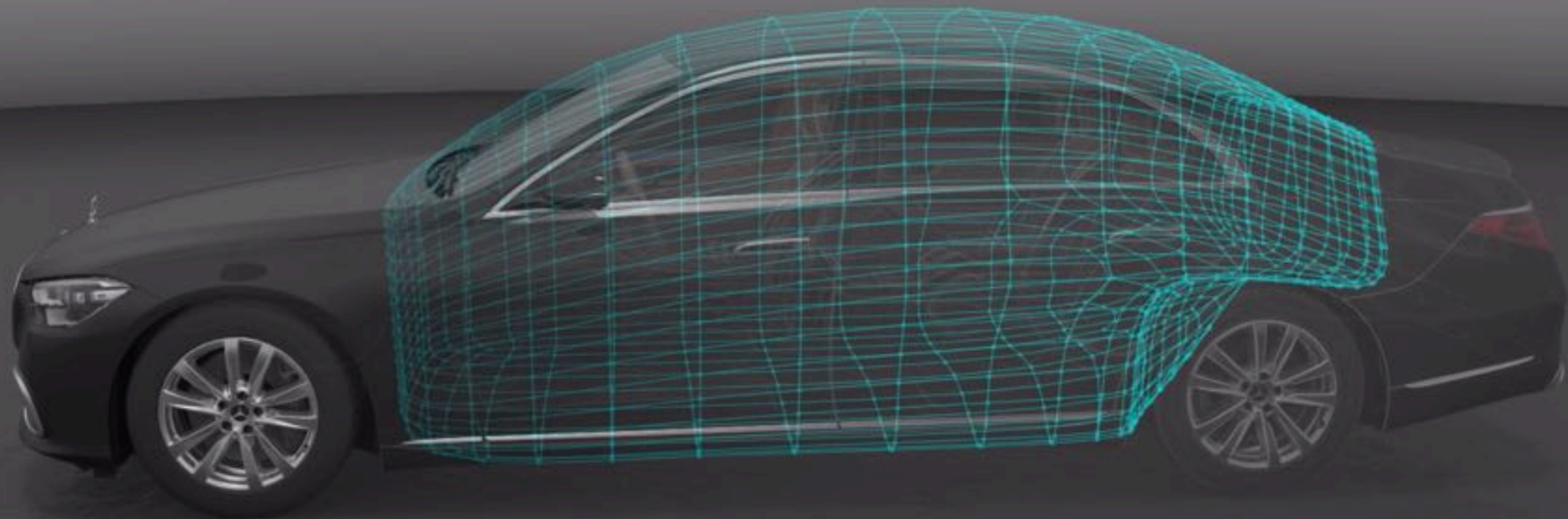


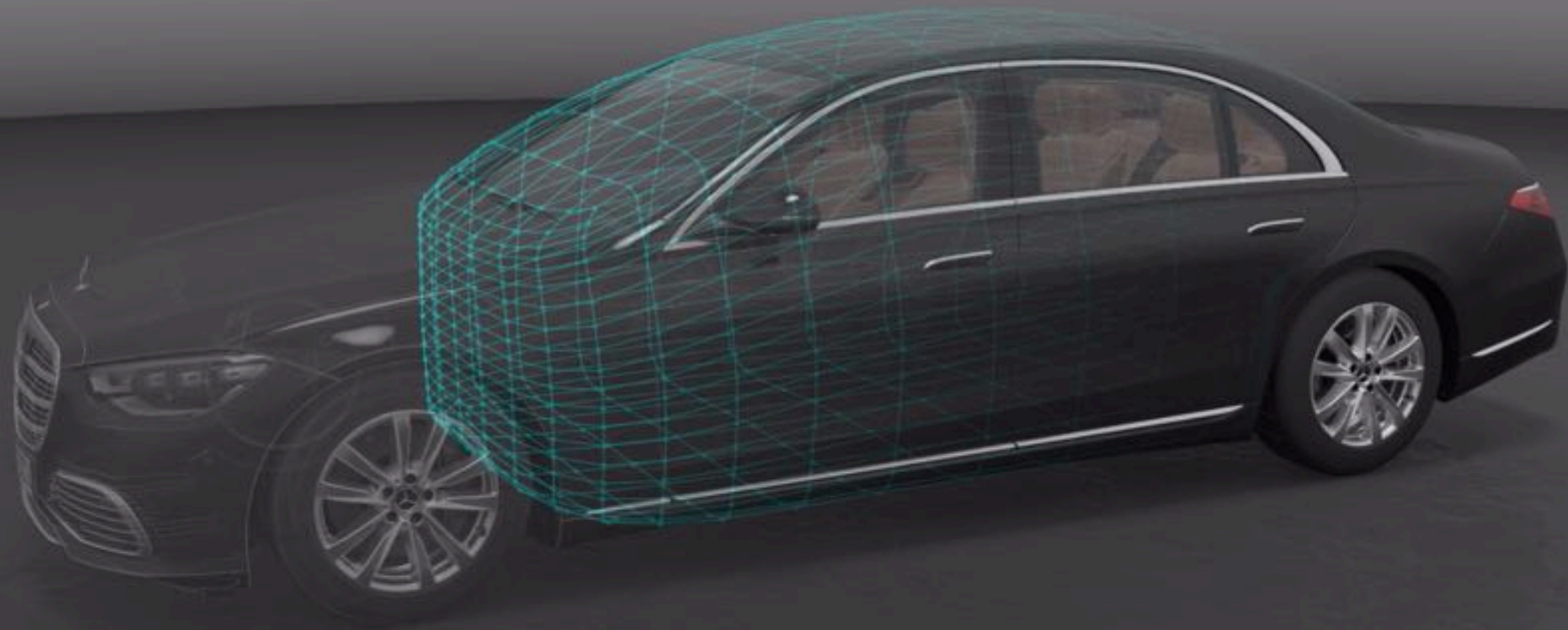


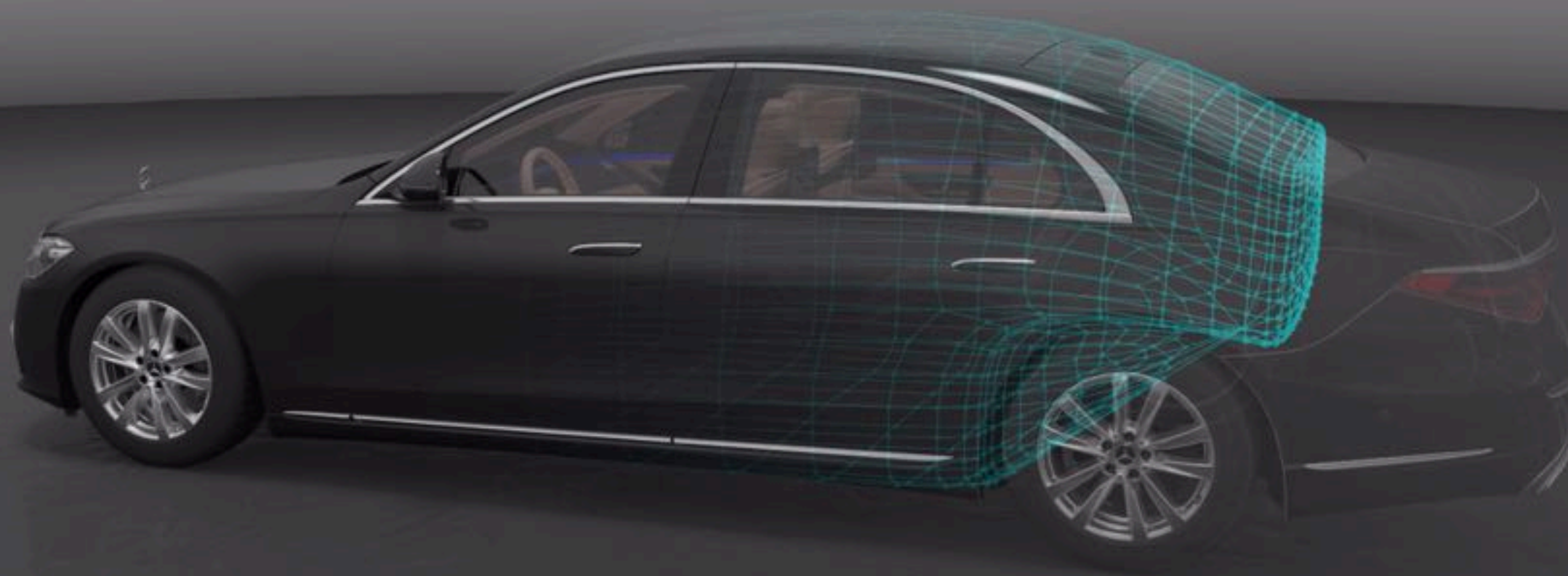


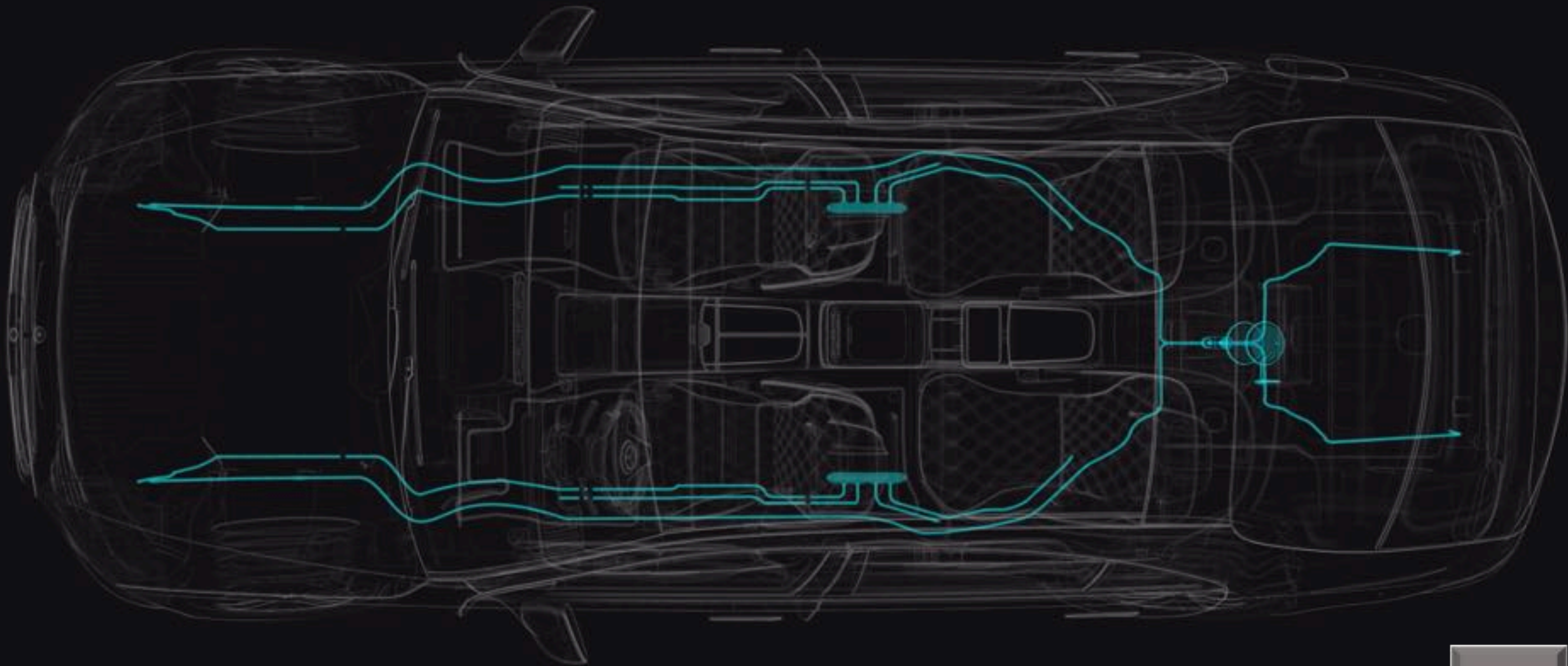


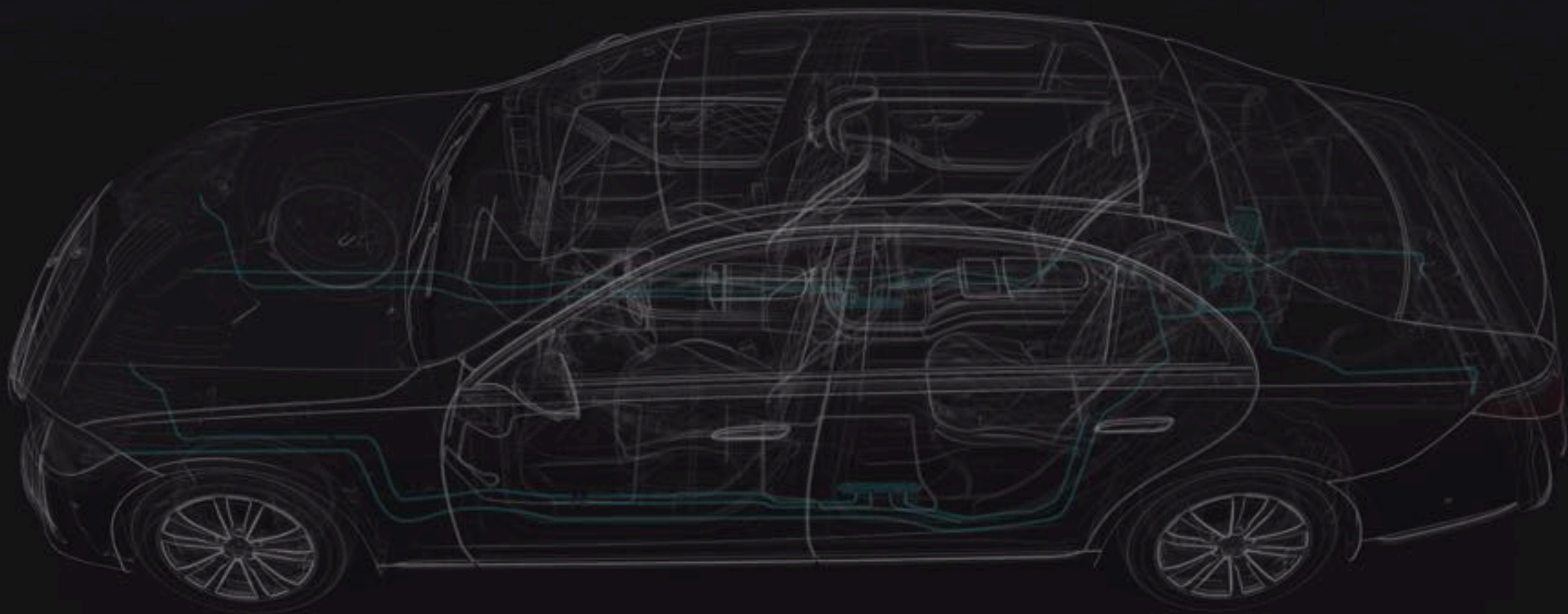




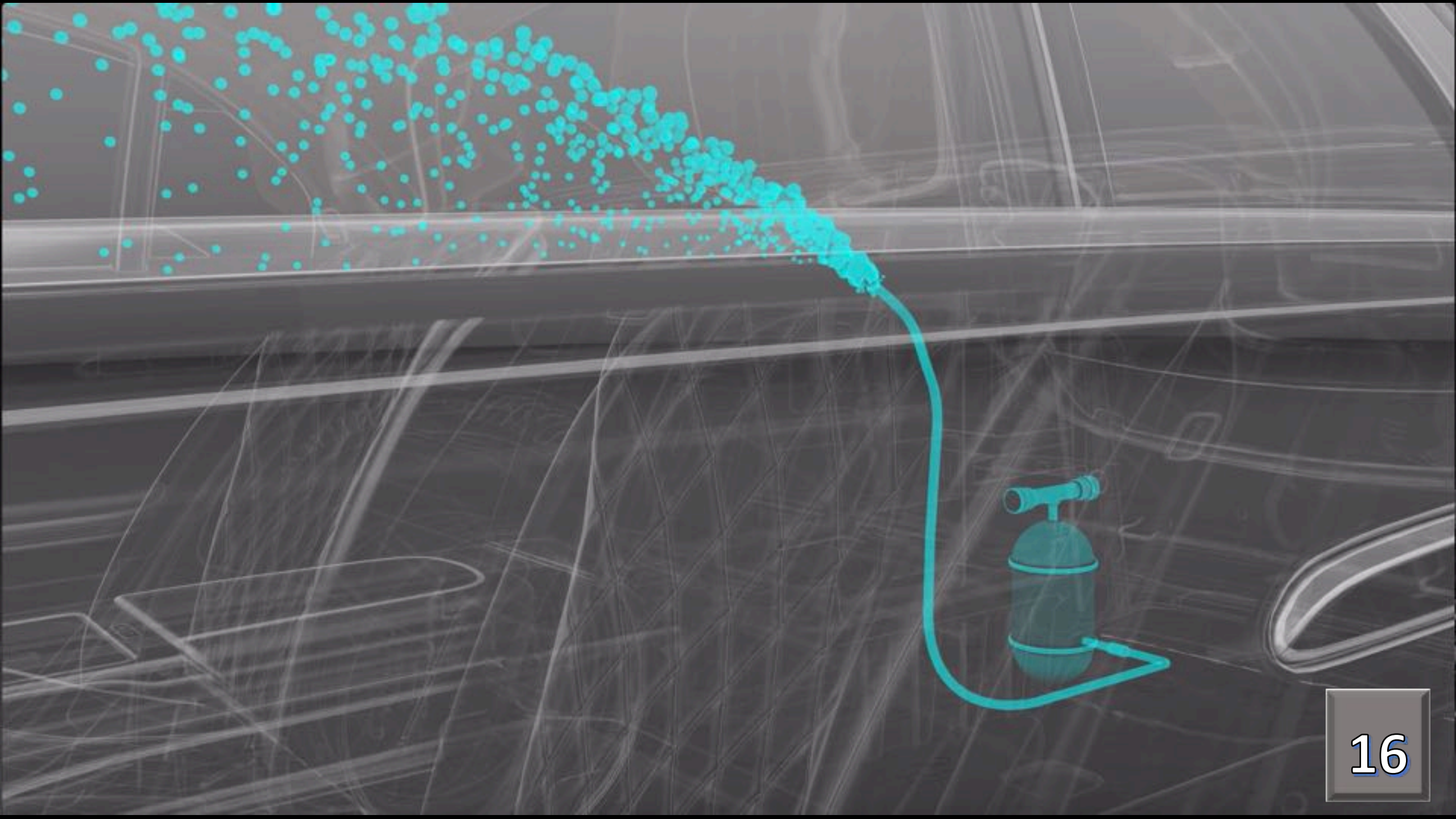


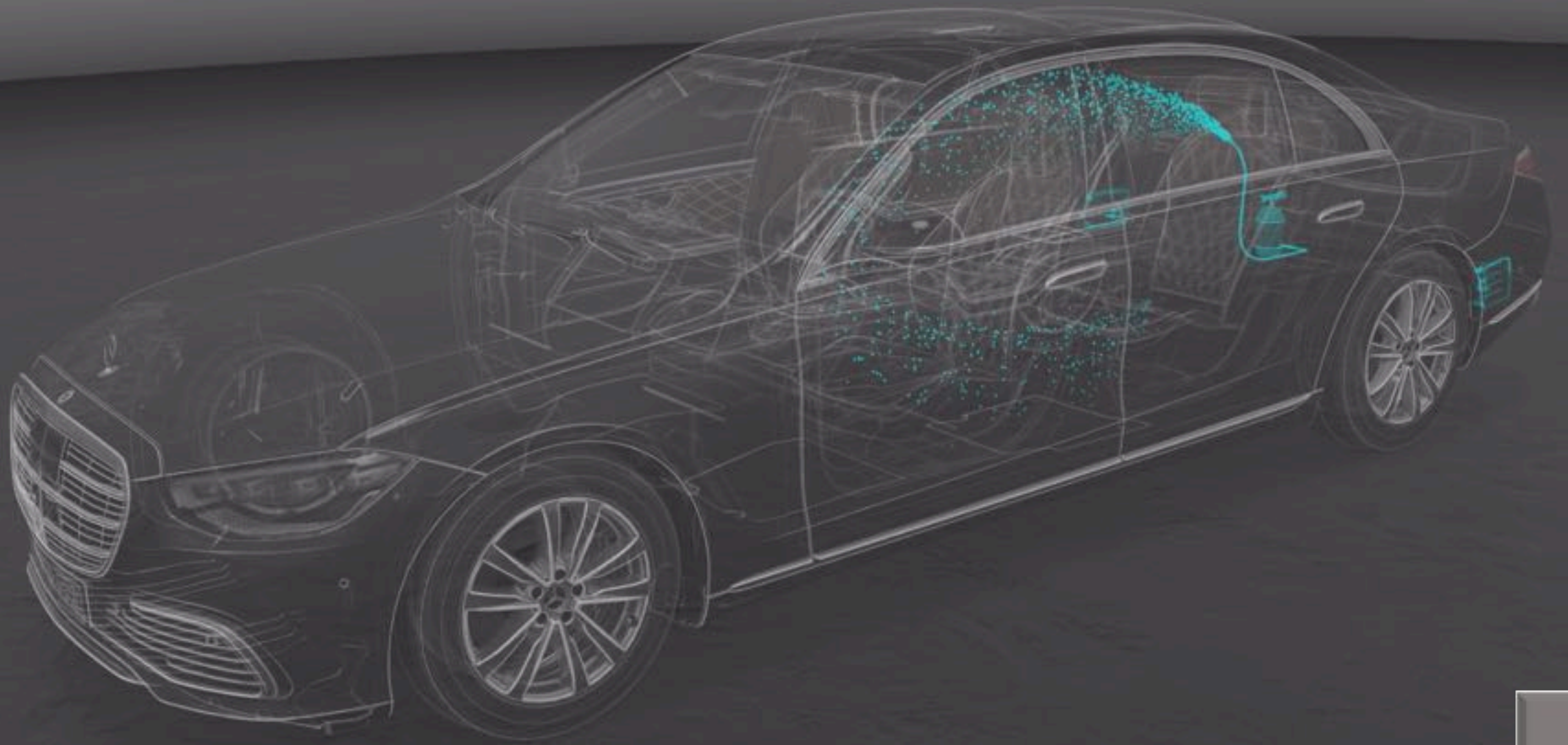










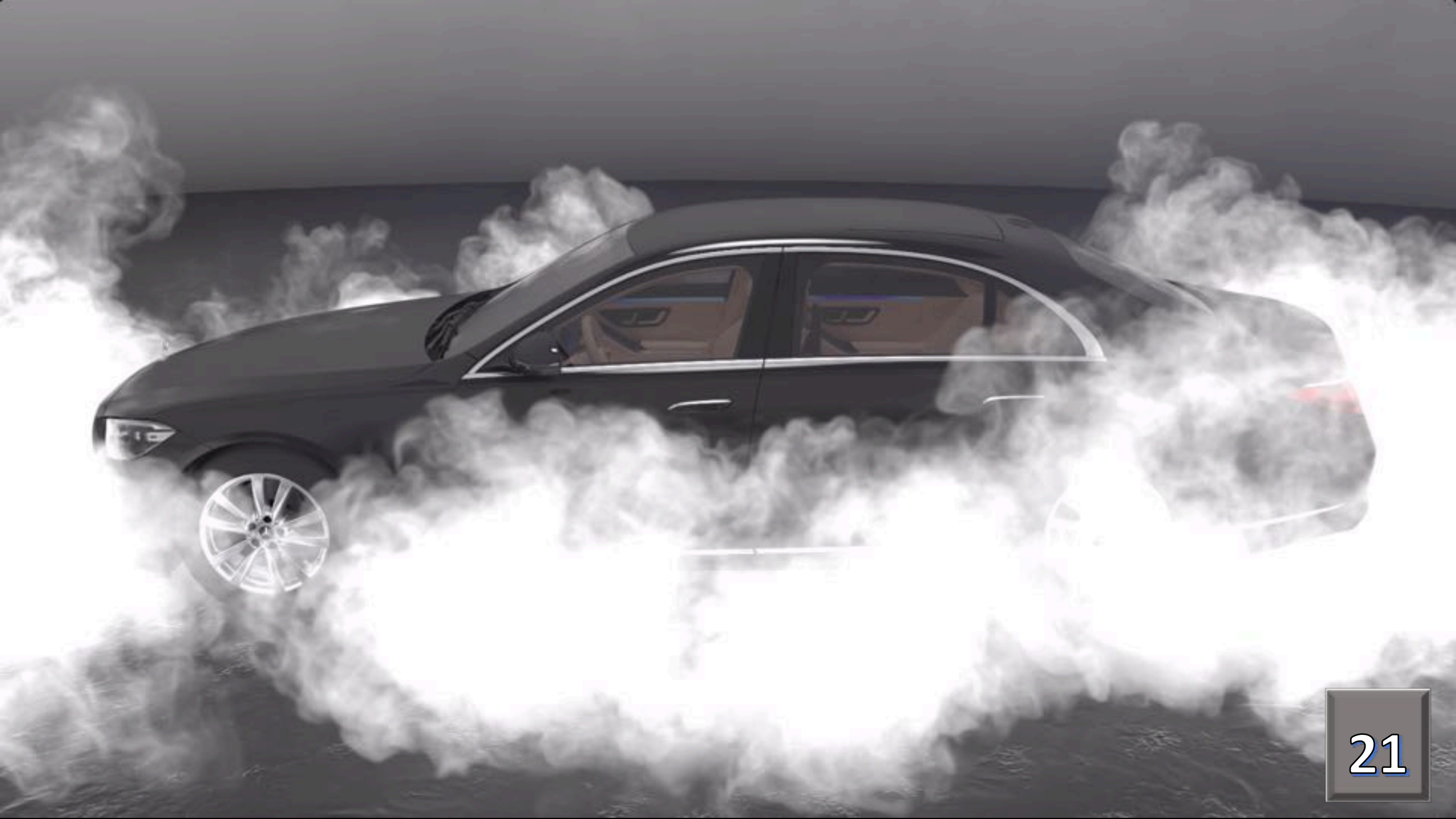
















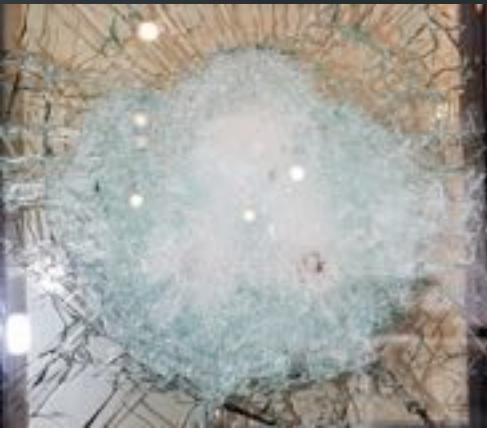








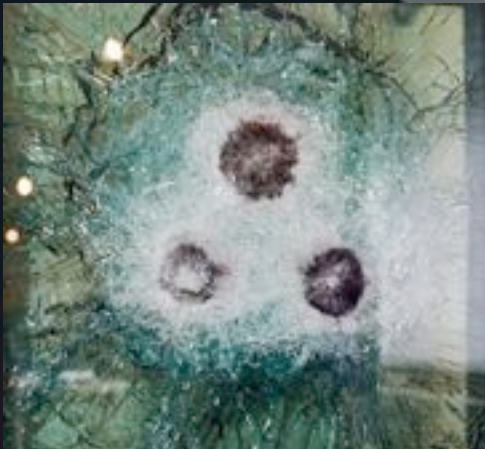
Mercedes-Benz S680 V223 4Matic Guard with protection level VR10 - full protection against hits from sniper rifle Dragunov 360



Transparent armor



Opaque armor



## General description

The safest car in the world? That should be the armored version of the Mercedes S-Class. Inside everything is so princely, outside she doesn't even let herself be shaken by 12.5 kilos of explosives. We drive the Guard, which at 4.2 tons weighs about twice as much as an unarmoured S-Class and at 543,950 euros costs around twice as much as one of these ordinary Maybach 680 V12s.

Certified by the fire department. So no, the Guard, it's not about conventional street crime, something like robbers 'on motorbikes who tear open the door at red lights and steal the handbag of the lady from the back seat. We're talking about sniper rifles with a hard steel core and incendiary device or just over 12.5 kilograms of explosives. The Guard version of the S-Class withstands all of this, as certified by the state fire department in Ulm. Yes, it really does exist, and they fired 300 bullets at the S-Class alone. Because nothing would have happened to the passengers inside - and nothing happened to the dummy inside - the Guard achieves the highest civil resistance class called VR10. Everything about it already goes into the military and falls under the legislation for war weapons exports There are a good two tons of armor in the S-Class, but not somehow, but as an integral part. You can imagine it like this: There is an armored safety cage over which the body parts of the S-Class are placed like a silhouette. Mercedes armors the Guard models from the shell - seamless down to the smallest joint. This, in turn, cannot be achieved with the same complete seamlessness with retrospectively armored cars.

Now a few more figures: the front window weighs 120 kilograms, the rear window 100 kilograms, each door with side windows 200 kilograms. That is why one actuator per door helps with opening and locking - otherwise a security guard would be busy with it alone, or simply overwhelmed if the car is too slanted. But opening the safe driver's door is surprisingly easy - you can already guess its size because of the Fat, but she doesn't let you feel it. And therein lies the entire essence of the Guard. Inside it is a little narrower than a normal S-Class because of the additional space required by the wide armored side windows, and clear, a little cramped and also the armored glass with the wide frames distorts the view. But for all the important, endangered people in the rear, it offers the same comprehensive luxury, infotainment and wellness comfort. Like an S-Class with a lot of holiday luggage Of course, the greatest sensation of the S-Class Guard is its safety (friends, they showed us films how the 12.5 kilos of explosives go off on the side, under the car and on the roof, you think that no one will survive it can, but in fact you got out afterwards unharmed).

## **Ballistic protection**

- Specially protected passenger compartment all-round protection, roof-limited. Details upon request
- Splinter-protected body (resistance to explosion of two hand grenades, type HG85)
- Splinter-protected roof (resistance to explosion of one hand grenade, type HG85)
- Special protection multilayered polycarbonate glazing, all-round protection 360 degrees against hard core bullet in caliber 7,62x51mm NATO in installed position (triple bombardment, triangle size 15cm X 15cm X 15cm)
- Special protection multilayered polycarbonate glazing, all-round protection against hard core bullet in caliber 7,62x51mm NATO and 7,62x54 mm / 7,62x54R mm (Dragunov sniper rifle SVD) in recess (Triangular bombardment)

## **Security package:**

- Z07 Highest protection-package (VR10)
- Z10 Wheel with limp-home capability – Michelin PAX tyre system
- Z11 Window lift front left special protection vehicles
- Z12 Window lift front right special protection vehicles
- Z13 Window lift rear left special protection vehicles
- Z14 Window lift rear right special protection vehicles
- Z17 Heated windscreen
- Z21 Fire extinguishing system
- Z22 Panic alarm system (GAS)
- Z25 Emergency-fresh-air system
- Z28 Enhanced ballistic protection
- Z50 Pivoting lights in the rear left/right
- Z60 Opening switch for emergency trunk lid
- Z61 Auxiliary battery for emergency start
- Z77 Control code for speed limit 190 km/h
- Z86 Disable emergency opening of central locking
- Z90 Special function (multifunction control unit)

	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	2,40 ± 0,1	Winchester	10 + 0,5	360 ±10	168
	2	PM2 VR2	FSW 2 HVN 2					9mm Luger <sup>1)</sup>	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 <sup>1)</sup>	FMJ/RN/S C Tinned	8,00 ± 0,1	DAG DM 41	5 + 0,5	415 ±10	489
	4 <sup>1)</sup>	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	15,40 ± 0,1	Speer	5 + 0,5	440 ±10	151
5	PM5 VR5	BSW 5 HVN 5					.357 Magnum	FMa/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)	Stanag Level 1 when in addition 5,56 x 45 mm (Typ: M193)			.223 Rem <sup>2)</sup> (5,56 x 45)	FMJ/PB/S CP	4,0 ± 0,1	MEN 55 109	10 + 0,5	950 ±10	1805
				BR 6 FB 6 VR 6 (BRV 1999)				.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 <sup>3)</sup> (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  
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)  
FMa full brass  
I incendiary  
C.I.P. Permanent international commission for the testing of small arms  
TDCC Dimension sheets of the C.I.P.  
DAG RUAG Ammotec, Germany  
Geco RUAG Ammotec, Germany  
MEN Metallwerk Eisenhuetten Nasau, 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