

2025 Volvo V90 Technical Specifications

	B6 AWD (300 hp) aut	*Plug-in hybrids:T6 AWD (350 hp) aut	*Plug-in hybrids:T8 AWD (455 hp) aut
ENGINE			
Engines	B420T	B4204T52	B4204T56
Type	In-line, 4 cyl. supercharged and turbocharged	In-line, 4 cyl. Turbocharged with e-boost	In-line, 4 cyl. Turbocharged with e-boost
Configuration	AWD	AWD	AWD
Displacement	1969 cm³	1969 cm³	1969 cm³
Bore	82.0 mm	82.0 mm	82.0 mm
Stroke	93.2 mm	93.2 mm	93.2 mm
Engine cylinder block material	Aluminum	Aluminum	Aluminum
Cylinder head material	Aluminum	Aluminum	Aluminum
Compression ratio	9.0:1	10.3:1	10.3:1
Valves, no/cylinder	4 ea.	4 ea.	4 ea.
Camshafts	2 ea.	2 ea.	2 ea.
DOHC / SOHC	DOHC	DOHC	DOHC
Engine management system	Gasoline direct injection	Gasoline direct injection	Gasoline direct injection
Ignition sequence	1 - 3 - 4 - 2	1 - 3 - 4 - 2	1 - 3 - 4 - 2
Engine idling speed	770 rpm ± 75	850 rpm ± 50	850 rpm ± 50
Fuel, rec. Octane	95-98 RON	95-98 RON	95-98 RON
Max engine speed	6300 rpm	6000 rpm	6000 rpm
Max output	220 kW (300 hp) / 5400 rpm	186 kW (253 hp) / 5500 rpm	228 kW (310 hp) / 6000 rpm
Max torque	420 / 35 - 80 Nm / rps	350 / 41 - 83 Nm / rps	400 / 50 - 80 Nm / rps
Battery type	-	Lithium-ion battery	Lithium-ion battery
Battery content, total amount of energy (kWh) (Nominal)	-	18.8	18.8
Battery content, total amount of energy (kWh) (Usable)	-	14.7	14.7
Battery charging time ***, at 16A / 10A / 6A fuse (hours)	-	3.0 / 4.0 / 7.0	3.0 / 4.0 / 7.0
Battery charging time ****, at 16A / 10A / 6A fuse (hours)	-	5.0 / 7.0 / 12.0	5.0 / 7.0 / 12.0
Battery placement	-	Centrally in the tunnel of the car	Centrally in the tunnel of the car
Electrical motor max power (kW)	10 kW	107 kW	107 kW
Electrical motor max torque (Nm)	40 Nm	309 Nm	309 Nm
Driveline max power (kW)	-	107 kW and 186 kW ** ³	107 kW + 228 kW ** ³
Driveline max torque (Nm)	-	309 Nm and 350 Nm ** ³	309 Nm + 400 Nm ** ³
* Charging time can vary depending on vehicle climate and other active electric loads in the vehicle. Charging time as well depends on e.g. ambient temperature			
** AC 2-PHASE CHARGING TIME (200-240V), AC 2-phase only in EU			
*** AC 1-PHASE CHARGING TIME (200-240V)			
**** Up to			
TRANSMISSION			
Transmissions (AWD)	AWF8G55	AW TG-81SD	AW TG-81SD
First Gear (AWD)	5,057	5,250	5,250
Second Gear (AWD)	3,070	3,029	3,029
Third Gear (AWD)	2,050	1,950	1,950
Fourth Gear (AWD)	1,520	1,457	1,457
Fifth Gear (AWD)	1,262	1,221	1,221
Sixth Gear (AWD)	1,000	1,000	1,000
Seventh Gear (AWD)	0,792	0,809	0,809
Eighth Gear (AWD)	0,661	0,673	0,673
Reverse Gear (AWD)	3,992	4,015	4,015
Automatic Gearbox / final drive (AWD)	3,200	3,200	3,200
PERFORMANCE			
Performance	Automatic	Automatic	Automatic
Gearbox	AWF8G55	AW TG-81SD	AW TG-81SD
Acceleration, 0-100 km/h	6,2 sec	5,5 sec	4,8 sec
Top speed	180 km/h	180 km/h	180 km/h
WLTP "Low" l/100 km / CO ₂ g/km	11.9 - 12.5 l/100 km / 271 - 284 g/km	-	-
WLTP "Medium" l/100 km / CO ₂ g/km	7.9 - 8.6 l/100 km / 179 - 196 g/km	-	-
WLTP "High" l/100 km / CO ₂ g/km	6.6 - 7.4 l/100 km / 150 - 167 g/km	-	-
WLTP "Extra High" l/100 km / CO ₂ g/km	7.5 - 8.4 l/100 km / 170 - 191 g/km	-	-
WLTP Combined l/100 km / CO ₂ g/km	7.9 - 8.7 l/100 km / 179 - 197 g/km	0.8 - 1.1 l/100 km / 18 - 25 g/km	0.8 - 1.1 l/100 km / 18 - 25 g/km
Electric Range [EAER] WLTP, City.	-	107 - 86 km	108 - 86 km
Electric Range [EAER] WLTP, Comb.	-	87 - 74 km	87 - 74 km
Electric Consumption (kWh/100 km)	-	17.5 - 19.9 kWh/100 km	17.5 - 19.9 kWh/100 km
DIMENSIONS EXTERIOR			
Length (L103)	4945 mm	4945 mm	4945 mm
Wheelbase (L101)	2941 mm	2941 mm	2941 mm
Front Overhang (L104)	879 mm	879 mm	879 mm
Rear Overhang (L105)	1125 mm	1125 mm	1125 mm
Height (Including shark fen) (at curb weight) (H101)	1478 mm	1463 mm	1463 mm
Height (Including shark fen) (at curb weight + 1 person) (H101)	1472 mm	1458 mm	1458 mm
Height with open tailgate/trunklid (H110)	2106 mm	2106 mm	2106 mm
Width (fenders) (W103)	1879 mm	1879 mm	1879 mm
Width (door moldings) (W103)	1890 mm	1890 mm	1890 mm
Width (mirrors folded) (W145)	1895 mm	1895 mm	1895 mm
Width (Including mirrors, outer edge) (W144)	2019 mm	2019 mm	2019 mm
Width (Body width) (W116)	1879 mm	1879 mm	1879 mm
Track, front (depending on rim size) (W101-1)	1617 mm - 1638 mm	1617 mm - 1638 mm	1617 mm - 1638 mm
Track, front (depending on rim size) (W101-2)	1618 mm - 1639 mm	1618 mm - 1639 mm	1618 mm - 1639 mm
DIMENSIONS INTERIOR			
Headroom without panoramic roof (front) (Maximum) (H62-1)	1026 mm	1026 mm	1026 mm
Headroom with panoramic roof (front) (Maximum) (H62-1 SR)	1006 mm	1006 mm	1006 mm
Headroom without panoramic roof (front/rear) (H61-1 / H61-2)	983 mm / 966 mm	983 mm / 966 mm	983 mm / 966 mm
Headroom with panoramic roof (front/rear) (H61-1 SR / H61-2 SR)	959 mm / 957 mm	959 mm / 957 mm	959 mm / 957 mm
Passenger compartment width at shoulder height (front/rear) (W3-1 / W3-2)	1460 mm / 1420 mm	1460 mm / 1420 mm	1460 mm / 1420 mm
Leg room (front/rear) (L34 / L51-2)	1071 mm / 911 mm	1071 mm / 911 mm	1071 mm / 911 mm
Hip room (front/rear) (W5-1 / W5-2)	1432 mm / 1416 mm	1432 mm / 1416 mm	1432 mm / 1416 mm
GROUND CLEARANCE			
Ground clearance (at curb weight) (H156)	153 mm	151 mm	151 mm
Ground clearance (at curb weight + 1 person) (H156)	148 mm	146 mm	146 mm
WADING CAPABILITY			
Wading capability depth at curb weight (at walking speed)	250 mm	Up to a depth approximately level with the floor at walking speed	Up to a depth approximately level with the floor at walking speed
STEERING			
Steering ratio (angle/angle)	16,3	16,3	16,3
Turning circle (Curb to curb) (depending on rim size)	11,4 m - 11,8 m	11,4 m - 11,8 m	11,4 m - 11,8 m
Turning circle (Wall to wall) (depending on rim size)	11,8 m - 12,2 m	11,8 m - 12,2 m	11,8 m - 12,2 m
Turns of steering wheel end to end (depending on rim size)	2,9 / 3,0	2,9 / 3,0	2,9 / 3,0
CHASSIS AND BRAKES			
Suspension front	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar
Suspension rear	Integral Axle with Transverse Composite Leaf Spring, Hydraulic Shock Absorbers, Stabilizer Bar. Optional Air Suspension	Integral Axle with Transverse Composite Leaf Spring, Hydraulic Shock Absorbers, Stabilizer Bar. Optional Air Suspension	Integral Axle with Transverse Composite Leaf Spring, Hydraulic Shock Absorbers, Stabilizer Bar. Optional Air Suspension
Steering	Electric Power Assisted Rack and Pinion Steering	Electric Power Assisted Rack and Pinion Steering	Electric Power Assisted Rack and Pinion Steering
Braking system	Antilock Braking System (ABS) with Electronic Brake Distribution (EBD) and Electronic Brake Assistance (EBA)	Antilock Braking System (ABS) with Electronic Brake Distribution (EBD) and Electronic Brake Assistance (EBA)	Antilock Braking System (ABS) with Electronic Brake Distribution (EBD) and Electronic Brake Assistance (EBA)
Brake disc diameter (front) (16" / 17" / 18")	296 mm / 322 mm / 345 mm	296 mm / 322 mm / 345 mm	296 mm / 322 mm / 345 mm
Brake disc diameter (rear) (16" / 17")	302 mm / 320 mm	302 mm / 320 mm	302 mm / 320 mm
Brake disc thickness (front) (16" + 17" / 18")	28 mm / 30 mm	28 mm / 30 mm	28 mm / 30 mm
Brake disc thickness (rear) (16" / 17")	12 mm / 20 mm	12 mm / 20 mm	12 mm / 20 mm
Braking distance 100-0 km/h	35 m	35 m	35 m
VOLUMES			
Largest Luggage volume - First (V214-1) (Largest volume. Load height limited by the head lining. Front limited by vertical plane tangential to the rear side of the front seatback) Total (including V209)	1517 l	1454 l	1454 l
Largest Luggage volume - Second (V214-2) (Second largest. Load height limited by the headlining. Front limited by vertical plane tangential to the rear side of the front seatback) Total (including V209)	714 l	651 l	651 l
Open Luggage Compartment - First (V211-1) (Second seat folded. Load height limited to upper edge of the front seatback or lower edge of the rear window) Total (including V209)	904 l	841 l	841 l
Open Luggage Compartment - Second (V211-2) (Second seat up. Load height limited to the upper edge of the second seatback or second window) Total (including V209)	551 l	488 l	488 l
Luggage volume, Separate Storage Areas in Luggage Compartment, (V209) (Closed storage areas located around the luggage compartments, behind wheel arches, under the floor, or any other area) - without rep kit and recess	68 l	-	-
Luggage volume, Separate Storage Areas in Luggage Compartment, (V209) (Closed storage areas located around the luggage compartments, behind wheel arches, under the floor, or any other area) - rep kit	24 l	-	-
Luggage volume, Separate Storage Areas in Luggage Compartment, (V209) (Closed storage areas located around the luggage compartments, behind wheel arches, under the floor, or any other area) - with spare wheel	22 l	-	-
Luggage volume, Separate Storage Areas in Luggage Compartment, (V209) (Closed storage areas located around the luggage compartments, behind wheel arches, under the floor, or any other area) - rep kit (B4204T52, B4204T56)	-	51	51
LENGTHS			
Cargo length from the first seatback to the tailgate measured at - the height of the floor covering (L212-1)	1988 mm	1988 mm	1988 mm
Cargo length from the first seatback to the tailgate measured at - the top of the first seatback (L214-1)	1812 mm	1812 mm	1812 mm
Cargo length from the second seatback to the tailgate measured at - the height of the floor covering (L212-2)	1153 mm	1153 mm	1153 mm
Cargo length from the second seatback to the tailgate measured at - the top of the second seatback (L214-2)	890 mm	890 mm	890 mm
HEIGHTS			
Cargo floor height to ground (curb weight) (H253)	610 mm	610 mm	610 mm
Rear opening height, (car center line) (H202)	704 mm	704 mm	704 mm
Cargo height (rear wheel center and car center line) (H201)	759 mm	759 mm	759 mm
WIDTHS			
Cargo floor width, min. (Wheelhouse Width - at Floor) (W201)	1100 mm	1100 mm	1100 mm
Rear opening width: upper min (W205)	880 mm	880 mm	880 mm
Rear opening width at floor, min (W207)	1130 mm	1130 mm	1130 mm
WEIGHT/MISCELLANEOUS			
Weight, kg (min-max, depending on setup) (Curb weight*/MRO)	1868 kg / 1938 kg	2026 kg / 2075 kg	2026 kg / 2075 kg
Total Weight (Depending on type of engine, gearbox etc.)	2450 kg	2590 kg	2590 kg
Max trailer weight, Unbraked (Max)	750 kg	750 kg	750 kg
Max trailer weight, Braked (Max)	2200 kg	2100 kg	2100 kg
Fuel tank, Petrol	60 l	60 l	60 l
Aerodynamics, (Cd)	0,30 - 0,33	0,30 - 0,33	0,30 - 0,33
Aerodynamics, (Frontal area)	2,30 m²	2,30 m²	2,30 m²
Aerodynamics, (Cd*A)	0,69 - 0,76	0,69 - 0,76	0,69 - 0,76
Max roof load	100 kg	100 kg	100 kg
* MRO = Mass in Running Order			