

2023 Volvo XC90 Technical Specifications						
	B5 AWD (5 & 7 Seat) (250 hp) aut	B6 AWD (5, 6 & 7 Seat) (300 hp) aut	Recharge T8 AWD (6 & 7 Seat) (455 hp) aut	B5 AWD (5 Seat) (235 hp) aut	B5 AWD (6 Seat) (235 hp) aut	B5 AWD (7 Seat) (235 hp) aut
ENGINE						
Engines	B420T2	B420T	B420AT56	D420T2	D420T2	D420T2
Type	In-line, 4 cyl. turbocharged	In-line, 4 cyl. supercharged and turbocharged	In-line, 4 cyl. Turbocharged with e-boost	In-line, 4 cyl. twin turbo diesel	In-line, 4 cyl. twin turbo diesel	In-line, 4 cyl. twin turbo diesel
Configuration	AWD	AWD	AWD	AWD	AWD	AWD
Displacement	1969 cm³	1969 cm³	1969 cm³	1969 cm³	1969 cm³	1969 cm³
Bore	82.0 mm	82.0 mm	82.0 mm	82.0 mm	82.0 mm	82.0 mm
Stroke	93.2 mm	93.2 mm	93.2 mm	93.2 mm	93.2 mm	93.2 mm
Engine cylinder block material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Cylinder head material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Compression ratio	10.5:1	9.0:1	10.3:1	15.8:1	15.8:1	15.8:1
Valves, per cylinder	4 ea.	4 ea.	4 ea.	4 ea.	4 ea.	4 ea.
Camshafts	2 ea.	2 ea.	2 ea.	2 ea.	2 ea.	2 ea.
DOHC / SOHC	DOHC	DOHC	DOHC	DOHC	DOHC	DOHC
Engine management system	Gasoline direct injection	Gasoline direct injection	Gasoline direct injection	I-Art common rail direct injection	I-Art common rail direct injection	I-Art common rail direct injection
Ignition sequence	1 - 3 - 4 - 2	1 - 3 - 4 - 2	1 - 3 - 4 - 2	1 - 3 - 4 - 2	1 - 3 - 4 - 2	1 - 3 - 4 - 2
Engine idling speed	800 rpm ± 75	800 rpm ± 75	875 rpm ± 50	825 rpm ± 150	825 rpm ± 150	825 rpm ± 150
Fuel, rec. Octane	95-98 RON	95-98 RON	95-98 RON	Diesel *	Diesel *	Diesel *
Max engine speed	6200 rpm	6300 rpm	6000 rpm	5000 rpm	5000 rpm	5000 rpm
Max output	184 kW (250 hp) / 5400 - 5700 rpm	220 kW (300 hp) / 5400 rpm	228 kW (310 hp) / 6000 rpm	173 kW (235 hp) / 4000 rpm	173 kW (235 hp) / 4000 rpm	173 kW (235 hp) / 4000 rpm
Max torque	350 / 30 - 80 Nm / rps	420 / 35 - 80 Nm / rps	400 / 50 - 80 Nm / rps	480 / 29 - 38 Nm / rps	480 / 29 - 38 Nm / rps	480 / 29 - 38 Nm / rps
Battery type	-	-	Lithium-ion battery	-	-	-
Battery content, total amount of energy (kWh) (Nominal)	-	-	18,8	-	-	-
Battery content, total amount of energy (kWh) (Usable)	-	-	14,9	-	-	-
Battery charging time, at 16A / 10A / 6A fuse (hours)	-	-	5.0 / 8.0 / 13.0	-	-	-
Battery placement	-	-	Centrally in the tunnel of the car	-	-	-
Electrical motor max power (kW)	10 kW	10 kW	107 kW	10 kW	10 kW	10 kW
Electrical motor max torque (Nm)	40 Nm	40 Nm	309 Nm	40 Nm	40 Nm	40 Nm
Driveline max power (kW)	-	-	107 kW + 228 kW	-	-	-
Driveline max torque (Nm)	-	-	309 Nm + 400 Nm	-	-	-
* According to EN590 Maximum biodiesel (FAME) content 7%						
TRANSMISSION						
Transmissions (AWD)	AWF8G45	AWF8G55	AW TG-81SD	AWF8G55	AWF8G55	AWF8G55
First Gear (AWD)	5,057	5,057	5,250	5,057	5,057	5,057
Second Gear (AWD)	3,070	3,070	3,029	3,070	3,070	3,070
Third Gear (AWD)	2,050	2,050	1,950	2,050	2,050	2,050
Fourth Gear (AWD)	1,520	1,520	1,457	1,520	1,520	1,520
Fifth Gear (AWD)	1,262	1,262	1,221	1,262	1,262	1,262
Sixth Gear (AWD)	1,000	1,000	1,000	1,000	1,000	1,000
Seventh Gear (AWD)	0,792	0,792	0,809	0,792	0,792	0,792
Eighth Gear (AWD)	0,661	0,661	0,673	0,661	0,661	0,661
Reverse Gear (AWD)	3,992	3,992	4,015	3,992	3,992	3,992
Automatic Gearbox / final drive (AWD)	3,329	3,329	3,329	3,329	3,329	3,329
PERFORMANCE						
Performance	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Gearbox	AWF8G45	AWF8G55	AW TG-81SD	AWF8G55	AWF8G55	AWF8G55
Acceleration, 0-100 km/h	7,7 sec	6,7 sec	5,4 sec	7,6 sec	7,6 sec	7,6 sec
Top speed	180 km/h	180 km/h	180 km/h	180 km/h	180 km/h	180 km/h
WLTP "Low" l/100 km / CO₂ g/km	12.3 - 13.7 l/100 km / 278 - 311 g/km	12.5 - 13.3 l/100 km / 283 - 301 g/km	-	8.3 - 9.0 l/100 km / 218 - 235 g/km	8.3 - 9.0 l/100 km / 218 - 235 g/km	8.3 - 9.0 l/100 km / 218 - 235 g/km
WLTP "Medium" l/100 km / CO₂ g/km	8.2 - 9.1 l/100 km / 186 - 206 g/km	8.5 - 9.3 l/100 km / 192 - 212 g/km	-	6.7 - 8.2 l/100 km / 176 - 214 g/km	6.7 - 8.2 l/100 km / 176 - 214 g/km	6.7 - 8.2 l/100 km / 176 - 214 g/km
WLTP "High" l/100 km / CO₂ g/km	7.1 - 8.0 l/100 km / 162 - 181 g/km	7.5 - 8.5 l/100 km / 170 - 191 g/km	-	5.8 - 6.7 l/100 km / 152 - 177 g/km	5.8 - 6.7 l/100 km / 152 - 177 g/km	5.8 - 6.7 l/100 km / 152 - 177 g/km
WLTP "Extra High" l/100 km / CO₂ g/km	8.6 - 9.8 l/100 km / 196 - 222 g/km	8.9 - 10.1 l/100 km / 202 - 228 g/km	-	6.9 - 8.1 l/100 km / 181 - 211 g/km	6.9 - 8.1 l/100 km / 181 - 211 g/km	6.9 - 8.1 l/100 km / 181 - 211 g/km
WLTP Combined l/100 km / CO₂ g/km	8.6 - 9.6 l/100 km / 195 - 218 g/km	8.9 - 9.8 l/100 km / 201 - 225 g/km	1.2 - 1.5 l/100 km / 28 - 34 g/km	6.7 - 7.7 l/100 km / 176 - 202 g/km	6.7 - 7.7 l/100 km / 176 - 202 g/km	6.7 - 7.7 l/100 km / 176 - 202 g/km
Electric Range, NEDC* †	-	-	-	-	-	-
Electric Range [EAER] WLTP, City	-	-	92 - 81 km	-	-	-
Electric Range [EAER] WLTP, Comb.	-	-	73 - 64 km	-	-	-
Electric Consumption (kWh/100 km)	-	-	20.5 - 22.6 kWh/100 km	-	-	-
† * NEDC figures correlated from WLTP based testing						
† WLTP PHEV nomenclature. Combined refer to the combined value of all phases in WLTP. City refer to the first two phases of WLTP. low and medium. Weighted refer the calculated result for both petrol and electric drivetrain. EAER = Equivalent all-electric range.						
MEASUREMENTS AND VOLUMES						
Length	4953 mm	4953 mm	4953 mm	4953 mm	4953 mm	4953 mm
Width (Body width)	1923 mm	1923 mm	1923 mm	1923 mm	1923 mm	1923 mm
Width (with small wheelarch)	1931 mm	1931 mm	1931 mm	1931 mm	1931 mm	1931 mm
Width (with large wheelarch)	1958 mm	1958 mm	1958 mm	1958 mm	1958 mm	1958 mm
Width (incl mirrors folded)	2008 mm	2008 mm	2008 mm	2008 mm	2008 mm	2008 mm
Width (Including mirrors, outer edge)	2140 mm	2140 mm	2140 mm	2140 mm	2140 mm	2140 mm
Height (Including shark fin antenna)	1773 / 1771 mm	1773 / 1771 mm	1767 mm	1773 mm	1771 mm	1771 mm
Height with open tailgate/trunklid (H110)	2148 mm / 2146 mm	2148 mm / 2146 mm	2146 mm	2148 mm	2146 mm	2146 mm
Wheelbase	2984 mm	2984 mm	2984 mm	2984 mm	2984 mm	2984 mm
Track, front (Tire (width): 235 / 275)	1665 mm / 1673 mm	1665 mm / 1673 mm	1665 mm / 1673 mm	1665 mm / 1673 mm	1665 mm / 1673 mm	1665 mm / 1673 mm
Track, front, with air suspension (Tire (width): 235 / 275)	1668 mm / 1676 mm	1668 mm / 1676 mm	1668 mm / 1676 mm	1668 mm / 1676 mm	1668 mm / 1676 mm	1668 mm / 1676 mm
Track, rear (Tire (width): 235 / 275)	1667 mm / 1675 mm	1667 mm / 1675 mm	1667 mm / 1675 mm	1667 mm / 1675 mm	1667 mm / 1675 mm	1667 mm / 1675 mm
Track, rear, with air suspension (Tire (width): 235 / 275)	1671 mm / 1679 mm	1671 mm / 1679 mm	1671 mm / 1679 mm	1671 mm / 1679 mm	1671 mm / 1679 mm	1671 mm / 1679 mm
Ground clearance (Standard chassis) (at Curb weight)	223 mm	223 mm	223 mm	223 mm	223 mm	223 mm
Ground clearance (with air suspension) (at Curb weight)	212 mm - 252 mm	212 mm - 252 mm	212 mm	212 mm - 252 mm	212 mm - 252 mm	212 mm - 252 mm
Ground clearance (at Curb weight + 1 person)	216 mm	216 mm / 217 mm / 217 mm	205 mm	217 mm	217 mm	216 mm
Approach angle (at curb weight)	21.0 degr	21.0 degr	21.0 degr	21.0 degr	21.0 degr	21.0 degr
Departure angle (at curb weight)	21.0 degr	21.0 degr	21.0 degr	21.0 degr	21.0 degr	21.0 degr
Breakover angle (at curb weight)	21.3 degr	21.3 degr	21.3 degr	21.3 degr	21.3 degr	21.3 degr
Wading capability depth at curb weight (at walking speed)	450 mm	450 mm	Up to a depth approximately level with the floor at walking speed	450 mm	450 mm	450 mm
WEIGHT/MISCELLANEOUS						
Weight (Depending on type of engine, gearbox etc.)	2084 kg - 2170 kg	2084 kg - 2170 kg	2285 - 2297 kg	2084 kg - 2170 kg	2084 kg - 2170 kg	2084 kg - 2170 kg
Total Weight (Depending on type of engine, gearbox etc.)	2640 kg - 2840 kg	2640 kg - 2840 kg	2870 kg - 2950 kg	2640 kg - 2840 kg	2640 kg - 2840 kg	2640 kg - 2840 kg
Max trailer weight, Unbraked (Max)	750 kg	750 kg	750 kg	750 kg	750 kg	750 kg
Max trailer weight, Braked (Max)	2400 kg	2700 kg	2400 / 2400 kg	2700 kg	2700 kg	2700 kg
Fuel tank, Petrol	71 l	71 l	70 l	-	-	-
Fuel tank, Diesel	-	-	-	71 l	71 l	71 l
SCR tank	-	-	-	11,7 l	11,7 l	11,7 l
Aerodynamics, (Cd)	0,33	0,33	0,33	0,33	0,33	0,33
Aerodynamics, (Frontal area)	2,78 m²	2,78 m²	2,78 m²	2,78 m²	2,78 m²	2,78 m²
Max roof load	100 kg	100 kg	100 kg	100 kg	100 kg	100 kg
INTERIOR MEASUREMENTS						
Headroom with sunroof (front/rear/third row) (6+7 seat)	987 mm / 979 mm / 923 mm	987 mm / 979 mm / 923 mm	987 mm / 979 mm / 923 mm	-	987 mm / 979 mm / 923 mm	987 mm / 979 mm / 923 mm
Headroom without sunroof (front/rear/third row) (6+7 seat)	998 mm / 997 mm / 923 mm	998 mm / 997 mm / 923 mm	998 mm / 997 mm / 923 mm	-	998 mm / 997 mm / 923 mm	998 mm / 997 mm / 923 mm
Headroom with sunroof (front/rear) (5 seat)	987 mm / 979 mm	987 mm / 979 mm	-	987 mm / 979 mm	-	-
Headroom without sunroof (front/rear) (5 seat)	998 mm / 999 mm	998 mm / 999 mm	-	998 mm / 999 mm	-	-
Headroom maximum, with sunroof (front)	1033 mm	1033 mm	1033 mm	1033 mm	1033 mm	1033 mm
Headroom maximum, without sunroof (front)	1051 mm	1051 mm	1051 mm	1051 mm	1051 mm	1051 mm
Passenger compartment width at shoulder height (front/rear/third row) (6+7 seat)	1465 mm / 1435 mm / 1192 mm	1465 mm / 1435 mm / 1192 mm	1465 mm / 1435 mm / 1192 mm	-	1465 mm / 1435 mm / 1192 mm	1465 mm / 1435 mm / 1192 mm
Passenger compartment width at shoulder height (front/rear) (5 seat)	1465 mm / 1435 mm	1465 mm / 1435 mm	-	1465 mm / 1435 mm	-	-
Leg room (front/rear/third row) (6+7 seat)	1038 mm / 940 mm / 811 mm	1038 mm / 940 mm / 811 mm	1038 mm / 940 mm / 811 mm	-	1038 mm / 940 mm / 811 mm	1038 mm / 940 mm / 811 mm
Leg room (front/rear) (5 seat)	1038 mm / 940 mm	1038 mm / 940 mm	-	1038 mm / 940 mm	-	-
Hip room (front/rear/third row) (6+7 seat)	1422 mm / 1435 mm / 1140 mm	1422 mm / 1435 mm / 1140 mm	1422 mm / 1435 mm / 1140 mm	-	1422 mm / 1435 mm / 1140 mm	1422 mm / 1435 mm / 1140 mm
Hip room (front/rear) (5 seat)	1422 mm / 1435 mm	1422 mm / 1435 mm	-	1422 mm / 1435 mm	-	-
Luggage volume, Variants with Spare wheel / including under floor volume (V211-1) (5 / 6 / 7 seat)	1119 l / 1045 l	1119 l / 1045 l / 1045 l	1005 l / 1005 l	1119 l	1045 l	1045 l
Luggage volume, Variants with Spare wheel / including under floor volume (V211-2) (5 / 6 / 7 seat)	709 l / 680 l	709 l / 680 l / 680 l	640 l / 640 l	709 l / - / -	- / 680 l / -	- / - / 680 l
Luggage volume, Variants with Spare wheel / including under floor volume (V211-3) (5 / 6 / 7 seat)	- / 302 l	- / 302 l / 302 l	262 l / 262 l	- / - / - l	- / 302 l / -	- / - / 302 l
Luggage volume, Variants with Spare wheel / including under floor volume (V214-1) (5 / 6 / 7 seat)	1874 l / 1856 l	1874 l / 1856 l / 1856 l	1816 l / 1816 l	1874 l / - / -	- / 1856 l / -	- / - / 1856 l
Luggage volume, Variants with Spare wheel / including under floor volume (V214-2) (5 / 6 / 7 seat)	1059 l / 1007 l	1059 l / 1007 l / 1007 l	967 l / 967 l	1059 l / - / -	- / 1007 l / -	- / - / 1007 l
Luggage volume, Variants with Spare wheel / including under floor volume (V214-3) (5 / 6 / 7 seat)	- / 356 l	- / 356 l / 356 l	316 l / 316 l	- / - / -	- / 356 l / -	- / - / 356 l
Luggage floor, height to ground	782 mm	782 mm	782 mm	782 mm	782 mm	782 mm
Rear opening height	816 mm	816 mm	816 mm	816 mm	816 mm	816 mm
Height of luggage compartment	889 mm	889 mm	889 mm	889 mm	889 mm	889 mm
Width of luggage compartment between wheelhouses	1130 mm	1130 mm	1130 mm	1130 mm	1130 mm	1130 mm
Rear opening width upper, min.	986 mm	986 mm	986 mm	986 mm	986 mm	986 mm
Rear opening maximum width	1204 mm	1204 mm	1204 mm	1204 mm	1204 mm	1204 mm
Rear opening width at floor, min.	1192 mm	1192 mm	1192 mm	1192 mm	1192 mm	1192 mm
Cargo length from the first seatback to the tailgate measured at the top of the first seatback / the height of the floor covering	1903 mm / 2040 mm	1903 mm / 2040 mm	1903 mm / 2040 mm	1903 mm / 2040 mm	1903 mm / 2040 mm	1903 mm / 2040 mm
Cargo length from the second seatback to the tailgate measured at the top of the second seatback / the height of the floor covering (6+7 seat)	1040 mm / 1260 mm	1040 mm / 1260 mm	1040 mm / 1260 mm	-	1040 mm / 1260 mm	1040 mm / 1260 mm
Cargo length from the second seatback to the tailgate measured at the top of the second seatback / the height of the floor covering (5 seat)	1000 mm / 1220 mm	1000 mm / 1220 mm	-	1000 mm / 1220 mm	-	-
Cargo length from the third seatback to the top of the third seatback / the height of the floor covering	335 mm / 554 mm	335 mm / 554 mm	335 mm / 554 mm	-	335 mm / 554 mm	335 mm / 554 mm
CHASSIS						
Suspension front	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension	Double Wishbone Suspension, Coil Springs, Hydraulic Shock Absorbers, Stabilizer Bar, Optional Air Suspension
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	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	Electric Power Assisted Rack and Pinion Steering	Electric Power Assisted Rack and Pinion Steering	Electric Power Assisted Rack and Pinion Steering
Steering ratio (angle/angle)	16,8	16,8	16,8	16,8	16,8	16,8
Turning circle (Curb to curb)	11,8 m / 12,1 m	11,8 m / 12,1 m	11,8 m / 12,1 m	11,8 m / 12,1 m	11,8 m / 12,1 m	11,8 m / 12,1 m
Turning circle (Wall to wall)	12,2 m / 12,5 m	12,2 m / 12,5 m	12,2 m / 12,5 m	12,2 m / 12,5 m	12,2 m / 12,5 m	12,2 m / 12,5 m
Turns of steering wheel end to end	3,0 / 2,9	3,0 / 2,9	3,0 / 2,9	3,0 / 2,9	3,0 / 2,9	3,0 / 2,9
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)	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) (Brake: 17" / 18")	345 mm	345 mm	366 mm	345 mm	345 mm	345 mm
Brake disc diameter (rear)	320 mm	320 mm	340 mm	320 mm	320 mm	320 mm
Brake disc thickness (front) (Brake: 17" / 18")	30 mm	30 mm	30 mm	30 mm	30 mm	30 mm
Brake disc thickness (rear) (Ventilated EPB)	20 mm	20 mm	20 mm	20 mm	20 mm	20 mm
Braking distance 100-0 km/h	36 m	36 m	36 m	36 m	36 m	36 m