Volvo Trucks. Driving Progress

THE LEADERS IN COAL TRANSPORTATION



VOLVO

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SUCCESS THAT SPANS HISTORY.

Over a hundred years of building the world’s finest trucks, Volvo Trucks has leveraged technology, innovation, skill and its vast support network to create the finest transportation solutions across various industries. Our solutions bring prosperity and success to vast numbers of businesses across the length and breadth of the globe. In India, we have replicated the same success we have across the world by bringing the same values, ethos, technology and innovation to bear on solving the country’s unique requirements in transportation. Volvo Trucks are known for being dependable, reliable, safe, fuel-efficient and driver friendly.

At Volvo Trucks, we not only design and create the finest transportation solutions that are used across various industries, we also invest an enormous amount of resources, time and effort into creating elaborate ecosystems that ensure our solutions are always performing at their best, throughout their lifetimes. Our efforts into developing our service, support and training ecosystems make Volvo Trucks a prized choice for success in almost all industries. However, where they are prized most is in places where they’re needed most. The coal industry with its unique requirements and extreme conditions is one of them. Allow us to show you how our solutions continue to create spectacular success stories across all industries.

THE LEADERS IN MINING.

The greatest test of technology is when it is pushed to its limits and it still performs seamlessly, day in and day out under the most testing conditions. Volvo Trucks are built to standards that are the best in the world and there is nowhere they shine brighter than in the dusty and gritty world of mining. Over the years, we have invested a lot of effort into developing our support ecosystems to keep our solutions out there doing what they do best, unhindered and thoroughly backed up by a huge network of support centres, specialists, trainers and customer care. We've created the world's safest and most comfortable cabins, instituted driver training programs to ensure maximum efficiency and built in the world's best technology in our trucks to bring you machines that deliver peak productivity at all times.

The greatest advantage of Volvo solutions in mining is their high adaptability to various operations and their efficiency in carrying them out. What's more, Volvo trucks fit seamlessly into mining ecosystems where Volvo Construction Equipment operates. Earth movers and other equipment from Volvo are used by a large section of the mining industry due to their technological superiority, efficiency and high durability. With the adage of having built the safest trucks for over a hundred years, Volvo trucks and Volvo CE equipment continue to set benchmarks in mining operations due to their excellent adaptability, technological superiority and seamless connectivity.

A HISTORY OF PERFORMANCE.

With a vast history of building the world's most efficient, productive and technologically superior trucks, Volvo Trucks has been at the forefront of ensuring the rapid development of capabilities in the industry and the consequent success stories of customers who operate our highly reliable solutions. Everything about a Volvo Truck is built around performance. At Volvo Trucks, we invest a vast amount of resources into design that is innovative, practical, efficient, safe, user friendly and highly networked to create platforms that can overcome any challenge and keep delivering their best, round-the-clock, throughout their life cycle. The advantage of being part of the Volvo Trucks ecosystem is the assurance that you're driving the world's best performing trucks on the road to success.



In addition to being industry leaders in mining with over 40% of the capacity being fulfilled by Volvo Trucks in the country, we have established benchmarks that are hard to beat across the entire landscape of mining. Volvo CE continues to be the most favoured equipment of choice in the mining industry and it is more so in the coal industry. The enormous advantages of Volvo Trucks working in close co-ordination with Volvo CE
equipment cannot be understated. With much shorter loading times and similarly trained crews, turnaround times become much shorter and lead to exceptionally high fleet productivity.

VOLVO TRUCKS. INDUSTRY SOLUTIONS.



OVERBURDEN
Volvo Mining trucks are designed for durability, long-lasting performance and high reliability with greater payload capacity, lower cost per ton, lower running costs and increased revenue compared to heavy dumper machinery.



OVER DIMENSIONAL CARGO [ODC]
Volvo ODC Solutions offer you unmatched pulling power and extreme low speed capability for demanding ODC applications. Volvo ODC solutions also offer you services that assure maximum productivity and uptime



COAL TRANSPORTATION
Volvo Coal transportation solutions offer you Industry leading performance, fuel efficiency and precision maneuvering in some of the safest and most technologically advanced platforms along with a range of services.



MINERAL TRANSPORTATION
Built to be durable, resilient and powerful, Volvo Trucks offer maximum uptime, performance and durability required in the mineral transportation industry. We offer the safest, most productive, efficient and highly profitable trucks.



SPECIAL APPLICATIONS
As one of the world's largest brands in commercial transportation, we have long focused on creating specialized solutions to ensure flawless transport ecosystems driven by Volvo technology for maximum productivity and efficiency.

TREE TRANSPLANTER |
ROAD TRAIN | BOOM PUMP | WATER SPRINKLER |
FUEL BOWSER



INSTITUTIONAL BUSINESS
At Volvo Trucks, we bring extensive experience, technology and expertise to build the world's most rugged trucks. We build reliable, efficient and sturdy solutions that go above and beyond what is required of them with competitive life cycle costs.

FIRE TRUCK | QUASI- DEFENSE | OIL EXPLORA-
TION | CRASH-FIRE TENDER | PORT OPERATIONS



PORT OPERATIONS
The higher carrying capacity of Volvo trucks ensures that unloading of vessels at port as well as intercarting takes place in a shorter time. Our highly reliable solutions ensure that work goes on uninterrupted.

CONSTRUCTION & INFRA

With industry leading total cost of ownership, superior fuel efficiency and excellent aftermarket services, Volvo Trucks are preferred for their high productivity across the construction transport business. Built to be long lasting and durable while hauling heavy payloads, Volvo Trucks offer the best solutions in the industry.

QUARRY | GRANITE | MARBLE













LONG HAUL

With a range of solutions full of features that assure world-class safety and driver comfort, Volvo Trucks offers some of the world's best solutions in the long haul space. Technologically superior with high-end features that ensure seamless operation, Volvo Trucks long haul solutions are supported with industry leading services to help us deliver maximum uptime.

CONTAINER MOVEMENT | PERISHABLE | MEDICINES | HORTICULTURE | PETROLEUM | SPECIAL CHEMICALS



AS RUGGED AS IT GETS. THE VOLVO FMX.

Volvo FMX - 33 Cu.M

A HIGH CAPACITY COAL TRANSPORT SOLUTION.
With a high volumetric capacity of 33 Cu.M, a powerful driveline delivering 460 hp / 2300 Nm torque that comes mated with the I-Shift automated transmission, the Volvo FMX 33Cu.M is an unmatched solution due to its sheer capacity and operating economy.

The reliable and powerful FMX platform helps you get higher productivity with a lower fleet size, ensures high uptime, long service life and much higher returns on your investment. Maximized payload and volumetric capacity is a result of the unique U-type body design that enables the body to be more lightweight.

With an increasing demand for coal evacuation, this product is the perfect solution if you're looking to transport more coal with better efficiency.



L150

With the powerful 13 liter D13 engine, the L150 is an excavator that offers the power and perfomance required in demanding mining applications. Fuel efficient and durable build with a high degree of driver comfort, the L150 offers fast cycle times and up to 10% better productivity with the latest technology and a range of features.



KNOW WHERE YOU'RE GOING.
CHOOSE THE BEST TO GET THERE.



AN OVERVIEW OF THE COAL TRANSPORT INDUSTRY IN INDIA.

Profitability in coal mining is largely dependent on a fine balance between controlling capital and operating costs. The transportation of mined coal often comprises nearly 50-60% of the total cost of mining, depending on lead distance. The best way to save on the transportation of coal and increase profitability is to find smarter mining solutions that save fuel amid rising fuel costs.

Volvo Trucks offer great benefits that lower costs and increase productivity. They don't need wider, more expensive roads to haul from pits. As Volvo trucks also meet the highest safety requirements in the world, they can also be operated on roads where legal load adherence is not required. This saves costs through shorter lead time in transferring coal from larger over dimensioned mine haulage equipment along with the resultant increased profitability.

But that isn't all. In addition to Volvo Trucks offering 11–12 liters/hour in operation compared to 50–60 liters/hour for a large machine, tough operating conditions at smaller mines make onsite support with stocks of parts essential. With the most efficient and expansive service network that reaches even the smallest mines across India, Volvo Trucks makes it very easy to maintain high uptime and maximum productivity.

At Volvo Trucks, we have built an elaborate ecosystem of support services and driver training programmes that ensure peak fuel efficiency and maximum uptime at all times. We understand that uptime is the key and the precondition to business growth and Volvo's vast, integrated after-sales solutions are custom-made, to ensure your business, like our trucks, stay on the road delivering the best they can at all times. With solutions for varying requirements in the coal transportation industry, Volvo trucks gives you the most durable, powerful, efficient and profitable trucks with the maximum uptime.



LEADERS IN THE MINING INDUSTRY IN INDIA

When it comes to the coal transport industry, Volvo Trucks are the undisputed leaders. Providing you with industry leading products, features and technology that hugely sharpen your competitive edge, in and out of the pit, Volvo trucks work with maximum uptime to help your business succeed.

Offering top-of-the-line productivity for your freight and logistics needs as well as reliable coal transportation in both on/off-road applications, Volvo Trucks deliver the best value both in and out of the pits, day in and day out while keeping your revenues flowing in.





A variety of combinations to choose from

With a wide range of offerings from Volvo, you can choose the right combination of loading and hauling equipment depending on the application's requirements.

Excavator and Tipper

When coal is to be loaded from a blasted bench, our excavators work well with our tippers as they can be positioned in such a way as to reduce cycle time during loading. Choose from the range of EC300DL (33 tn), EC380DL (41 tn) or EC480DL (48 ton) excavators with buckets of 1.8, 2.3 or 3.1 Cu.m to load the 33 Cu.m body of FMX460 coal tipper. EC480DL with FMX460 will be the best combination due to matching bucket capacity and commonality of the 13 ltr engine between the two.

Wheel Loader and Tipper

For loading coal from a heap (surface mine or blasted), Wheel loaders are more suitable due to their gathering and scooping action. Powered by the 13 ltr D13 engine common across the suitable wheel loaders L150H, L180H, L220H and also the tipper FMX460, the combination offers productivity, reliability, higher fuel efficiency and unmatched operator comfort. The models offer the bucket capacities of 4 cu.m, 4.6 cu.m or 5.2 cu.m respectively.

VOLVO TRUCKS. THE FIVE PILLARS OF EXCELLENCE.

Robust solutions tailored to the unique demands of coal mining.

Volvo mining trucks are robust, durable and reinforced to extreme levels of endurance. They are designed to give you the power and the technology for continuous action with heavy loads in the most demanding conditions. Volvo Trucks give you industry-leading performance, excellent fuel-efficiency, precision maneuvering and world-class safety to keep things moving quickly and safely. Across the country, we offer the best professional onsite support and service to ensure maximum productivity and peak uptime. Volvo Trucks' robust mining solutions are tailored to make your business more productive and profitable.



Productivity

Durable, resilient and enduring, heavy-duty Volvo Trucks come with high axle loads configurations that offer up to 20 tonnes front axle loads with dual front axles and up to 48 tonnes on the rear axles. With Volvo Trucks, distributing loads is a breeze. With higher payload capacities at lower costs per ton, lower running costs compared to heavy dumper machinery and increased revenue, Volvo Trucks offer you the ultimate in productivity.



Fuel Efficiency

World-Class Volvo engines with their wide maximum torque bands combined with advanced drivelines that include the industry leading I-SHIFT give you the perfect balance of power and fuel efficiency. In addition to this, our industry renowned Driver Development Program ensures efficient and safe driving that you can easily monitor and track in real-time using the proprietary Volvo DYNAFLEET, our fleet management system. Enabling monitoring of driver and vehicle performance, DYNAFLEET lets you identify improvement areas to reduce operating costs and improve your bottom line.



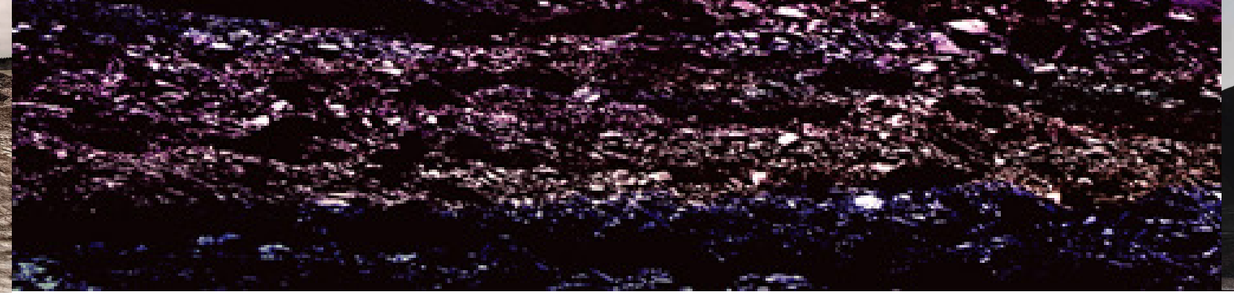


Uptime

Regardless of where the mine is located, you can rely on Volvo Trucks' network and Uptime Center for professional service and genuine Volvo parts. At Volvo Trucks, we provide on-site service. Volvo Technicians possess all the tools, training and expertise to deal with the most complex problems, ensure service quality and long-term reliability. Our elaborate service planning optimizes service intervals for maximum uptime.



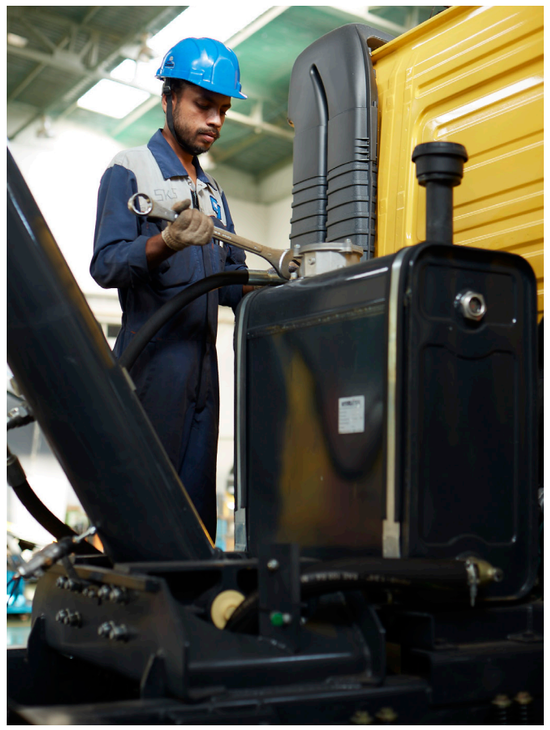






Safety

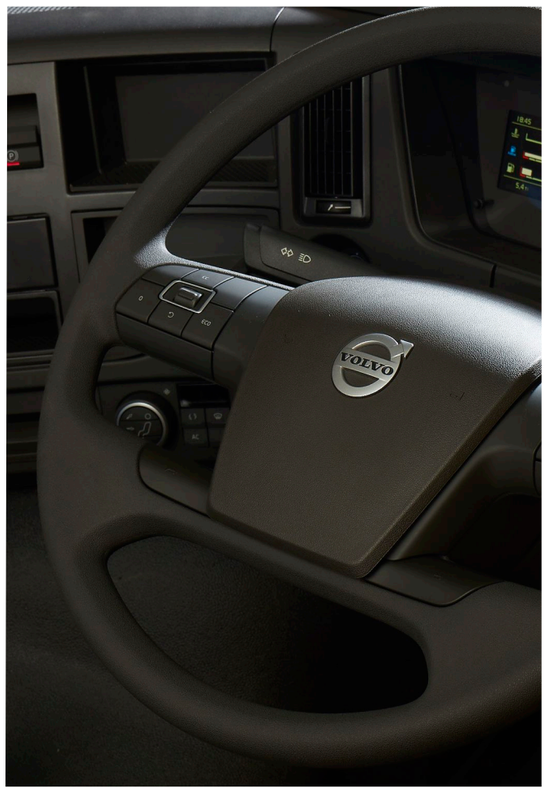
All Volvo Cabs are made of High Strength Steel and meet Swedish cab strength standards – the toughest in the world. ELECTRONIC BRAKING SYSTEM for both disc or drum brakes offers greatly improved braking feel and performance, and additional features such as ESP (Electronic Stability Control), HILL START AID and TRACTION CONTROL for better vehicle control, decreased brake wear and enhanced safety. This, combined with outstanding driver visibility and a range of other safety features, helps protect the driver and other people in tough working conditions.



Durability

Strong, robust and durable, a Volvo mining truck is designed and built for long-lasting performance and reliability. The strong

driveline, chassis and high-strength cab are good examples. Not to mention the high ground clearance and sturdy HEAVY-DUTY BUMPER, standard on the Volvo FMX. Made of 3 mm thick steel and covered by a thick polypropylene coat, the three-part bumper helps protect the truck in the most extreme working environments.



VOLVO FMX 460
33 Cu.m Coal Tipper

High capacity solution for coal transport.

The 33 Cu.m capacity Volvo FMX tipper is an unmatched solution for coal transportation, due to its highest volumetric capacity and operating economy in its class. Built on a powerful driveline delivering 440 hp and 2200 Nm torque, matched with a fully synchronised manual gearbox, it gives higher productivity by using lower fleet size. The reliable FMX platform ensures high uptime, long service life and higher returns on investment. The unique U-type body design is apt for carrying light weight crushed material, as it helps in keeping the centre of gravity of the load to the centre of the body and there by maintain the dynamic stability of the vehicle. Additionally, this design also enables the body to be light weight, thereby maximising available payload and offering maximum volumetric capacity for movement of materials.The all new, state-of-the-art cab of Volvo FMX offers maximum driving comfort and safety for long and continuous hours of operation ensuring high driver productivity.With increasing demand of coal evacuation, this product is a perfect solution to transport more coal at better fuel efficiency with lesser number of vehicles.

Brief specification

Engine
13 litre, Euro-4 Rated power 460 hp @ 1400-1800 rpm Max torque 2200 Nm @ 1050-1400 rpm
Gearbox
Automated i-Shift / splitter type14 forward and 4 reverse gears
Load carrying capacity
51 tonnes Gross Vehicle Weight
Tipper body capacity
33 Cu.m coal body

Salient features

- Best-in-class productivity
- Best-in-class engine horsepower and torque
- Best-in-class power-to-weight and torque-to-weight ratio
- Low operating cost per tonne of coal handled
- Highly robust and durable cab and chassis
- Newly designed dashboard with better ergonomics
- New electrical parking brake activation
- ‘Dynafleet Online’ -Volvo Telematics Solution
- DGMS safety features

Volvo L150H

Engine

V-ACT Stage II, 13 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electonically controlled unit injectors. The engine has wet replacable cylinder liners and replacable valve guides and valve seats. The throttle applications are transmitted electrically from the throttle pedal or the optional hand throttle .
Air Cleaning: 2 stages.
Cooling system: Hydrostatic, electronically controlled fan and intercooler of the air-to-air type.

L150H

Engine	Volvo	D13F
Max. power at	r/min	1 300
SAE J1995 gross	kW	220
	hp	299
ISO 9249, SAE J1349 net	kW	220
	hp	299
Max. torque at	r/min	1 000
SAE J1995 gross	Nm	1 960
ISO 9249, SAE J1349 net	Nm	1 957
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

L180H

Engine	Volvo	D13F
Max. power at	r/min	1 300 - 1 400
SAE J1995 gross	kW	246
	hp	334
ISO 9249, SAE J1349 net	kW	245
	hp	333
Max. torque at	r/min	1 000
SAE J1995 gross	Nm	2 030
ISO 9249, SAE J1349 net	Nm	2 024
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

L220H

Engine	Volvo	D13F
Max. power at	r/min	1 300 - 1 400
SAE J1995 gross	kW	274
	hp	373
ISO 9249, SAE J1349 net	kW	273
	hp	371
Max. torque at	r/min	1 100
SAE J1995 gross	Nm	2 231
ISO 9249, SAE J1349 net	Nm	2 220
Economic working range	r/min	800 - 1 600
Displacement	l	12.8

Electrical System

Central warning system: Contronic electrical system with central warning light and buzzer for following functions: - Serious engine fault - Low steering system pressure - Over speed warning engine - Interruption in communication (computer fault) Central warning light and buzzer with the gear engaged for the following functions. - Low engine oil pressure - High engine oil temperature - High charge air temperature - Low coolant level - High coolant temperature - High crank case pressure - Low transmission oil pressure - High transmission oil temperature - Low brake pressure - Engaged parking brake - Fault on brake charging - Low hydraulic oil level - High hydraulic oil temperature - Overspeeding in engaged gear - High brake cooling oil temperature front and rear axles.

		L150H	L180H	L220H
Voltage	V	24	24	24
Batteries	V	2 x 12	2 x 12	2 x 12
Battery capacity	Ah	2 x 170	2 x 170	2 x 170
Cold cranking capacity, approx	A	1 000	1 000	1 000
Alternator rating	W/A	2 280/80	2 280/80	2 280/80
Starter motor output	kW	7	7	7

Drivetrain

Torque converter: Single-stage.
Transmission: Volvo countershaft transmission with single lever control. Fast and smooth shifting of gears with Pulse Width Modulation (PWM) valve. Torque converter with lockup. Transmission: Volvo Automatic Power Shift (APS) with fully automatic shifting 1-4 and mode selector with 4 different gear shifting programs, including AUTO.
Axles: Volvo fully floating drive shafts with planetary hub reductions and nodular iron axle housing. Fixed front axle and oscillating rear axle. 100% differential lock on the front axle. Optional: Limslip rear.

		L150H	L180H	L220H
Transmission	Volvo	HTL 223	HTL 223	HTL 310
Torque multiplication, stall ratio		2.09:1	2.09:1	2.02:1
Maximum speed, forward/ reverse				
1st gear	km/h	6.1	6.1	6.7 / 6.6
2nd gear	km/h	12.6	12.6	11.6 / 11.4
3rd gear	km/h	23.5	23.5	21.7 / 21.4
4th gear	km/h	38	38	36.5 / 36.1
Measured with tires		26.5 R25 L3	26.5 R25 L3	29.5 R25 L4
Front axle/rear axle		Volvo/AWB 40B/40C	Volvo/AWB 40B/40B	Volvo/AWB 50/41
Rear axle oscillation	± °	15	15	15
Ground clearance	mm	610	610	600
at oscillation	°	15	15	15

Brake System

Service brake: Volvo dual-circuit system with nitrogen charged accumulators. Outboard mounted hydraulically operated, fully sealed oil circulation-cooled wet disc brakes. The operator can select automatic disengagement of the transmission when braking using Contronic.
Parking brake: Dry disc brake. Applied by spring force, electro-hydraulic release with a switch on the instrument panel.
Secondary brake: Dual brake circuits with rechargeable accumulators. One circuit or the parking brake fulfills all safety requirements.
Standard: The brake system complies with the requirements of ISO 3450.

		L150H	L180H	L220H
Number of brake discs per wheel front/rear		1/1	1/1	2/1
Accumulators	l	2 x 1.0 + 3 x 0.5	2 x 1.0 + 1 x 0.5	2 x 1.0 + 1 x 0.5

Cab

Instrumentation: All important information is centrally located in the operator's field of vision. Display for Contronic monitoring system.
Heater and defroster: Heater coil with filtered fresh air and fan with auto and 11 speeds. Defroster vents for all window areas.
Operator's seat: Operator's seat with adjustable suspension and retractable seatbelt. The seat is mounted on a bracket on the rear cab wall and floor. The forces from the retractable seatbelt are absorbed by the seat rails.
Standard: The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449). The cab meets with requirements according to ISO 6055 (Operator overhead protection - Industrial trucks) and SAE J386 (±Operator Restraint System±).
Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO2-eq

		L150H	L180H	L220H
Emergency exit: Use emergency hammer to break window				
Ventilation	m^3/ min	9	9	9
Heating capacity	kW	16	16	16
Air conditioning (optional)	kW	7.5	7.5	7.5

Lift Arm System

Torque Parallel linkage (TP-linkage) with high breakout torque and parallel action throughout the entire lifting range.

		L150H	L180H	L220H
Lift cylinders		2	2	2
Cylinder bore	mm	160	180	190
Piston rod diameter	mm	90	90	90
Stroke	mm	784	788	768
Tilt cylinder		1	1	1
Cylinder bore	mm	220	240	250
Piston rod diameter	mm	110	120	120
Stroke	mm	452	480	455

Volvo L150H

Hydraulic System

System supply: Two load-sensing axial piston pumps with variable displacement. The steering function always has priority.
Valves: Double-acting 2-spool valve. The main valve is electro operated.
Lift function: The valve has four positions; raise, hold, lower and floating position. Inductive/magnetic automatic boom kickout can be switched on and off and is adjustable to any position between maximum reach and full lifting height.
Tilt function: The valve has three functions including rollback, hold and dump. Inductive/magnetic automatic tilt can be adjusted to the desired bucket angle.
Cylinders: Double-acting cylinders for all functions.
Filter: Full flow filtration through 10 micron (absolute) filter cartridge.

		L150H	L180H	L220H
Working pressure maximum, pump 1 for working hydraulic system	MPa	29	29	29
Flow	l/min	180	217	253
at	MPa	10	10	10
engine speed	r/min	1 900	1 900	1 900
Working pressure maximum, pump 2 for steering-, brake-, pilot- and working hydraulic system	MPa	31	31	31
Flow	l/min	202	202	202
at	MPa	10	10	10
engine speed	r/min	1 900	1 900	1 900
Working pressure maximum, pump 3 for brake- and cooling fan system	MPa	25	25	25
Flow	l/min	77	77	77
at	MPa	10	10	10
engine speed	r/min	1 900	1 900	1 900
Pilot system, working pressure	MPa	3.5	3.5	3.5
Cycle times				
Lift	s	5.9	6.4	6.8
Tilt	s	2	1.8	1.6
Lower, empty	s	3.7	3.3	3.2
Total cycle time	s	11.6	11.5	11.6

Specifications

Tires L150H, L180H: 26.5 R25 L3. Tires L220H: 29.5 R25 L3

		Standard boom			Long boom		
		L150H	L180H	L220H	L150H	L180H	L220H
B	mm	7 070	7 190	7 480	7 570	7 620	7 800
C	mm	3 550	3 550	3 700	3 550	3 550	3 700
D	mm	480	480	530	470	490	530
F	mm	3 580	3 580	3 730	3 570	3 590	3 730
G	mm	2 134	2 134	2 135	2 157	2 133	2 133
J	mm	3 920	4 060	4 230	4 490	4 560	4 600
K	mm	4 340	4 470	4 660	4 900	4 970	5 020
O	°	58	57	56	59	55	56
Pmax	°	50	49	48	49	49	48
R	°	45	45	43	48	48	44
R_1*	°	48	48	47	53	53	49
S	°	66	71	65	61	63	63
T	mm	93	131	119	149	207	121
U	mm	520	570	600	640	660	680
X	mm	2 280	2 280	2 400	2 280	2 280	2 400
Y	mm	2 960	2 960	3 150	2 960	2 960	3 150
Z	mm	3 510	3 810	4 050	3 960	4 180	4 380
a_2	mm	6 790	6 790	7 100	6 790	6 790	7 100
a_3	mm	3 820	3 820	3 960	3 820	3 820	3 960
a_4	±°	37	37	37	37	37	37

* Carry position SAE

Bucket: L150H: 4.0 m^3 GP STE P T SEG L180H: 4.6 m^3 GP STE P T SEG L220H: 5.2 m^3 GP STE P T SEG

Steering System

Steering system: Load-sensing hydrostatic articulated steering.
System supply: The steering system has priority feed from a loadsensing axial piston pump with variable displacement.
Steering cylinders: Two double-acting cylinders.

		L150H	L180H	L220H
Steering cylinders		2	2	2
Cylinder bore	mm	100	100	100
Rod diameter	mm	60	60	60
Stroke	mm	390	525	525
Working pressure	MPa	21	21	21
Maximum flow	l/min	188	188	191
Maximum articulation	± °	37	37	37

Service Refill

Service accessibility: Large, easy-to-open hood covering whole engine department, electrically operated. Fluid filters and component breather air filters promote long service intervals. Possibility to monitor, log and analyze data to facilitate troubleshooting.

	L150H	L180H	L220H
Fuel tank	366	366	366
Engine coolant	55	55	55
Hydraulic oil tank	156	156	226
Transmission oil	48	48	48
Engine oil	50	50	50
Axle oil front	46	46	77
Axle oil rear	55	55	71

Sound Level

		L150H	L180H	L220H
Sound level in cab according to ISO 6396/SAE J2105				
LpA	dB(A)	69	70	70
External sound level according to ISO 6395/SAE J2104				
LwA	dB(A)	108	108	109

Where applicable, specifications and dimensions are according to ISO 7131, SAE J732, ISO 7546, SAE J742, ISO 14397, SAE J818.

VOLVO EC480DL IN DETAIL.

Engine

The Volvo diesel engine delivers lower emissions, superior performance and fuel efficiency. The engine uses precise, highpressure fuel injectors, turbo charger and intercooler, and electronic engine controls to optimize machine performance.
Air Filter: 3-stage and precleaner.
Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

EC480DL		
Engine	Volvo	D13F
Max power at	r/s / r/min	30 / 1800
Net (ISO 9249/SAEJ1349)	kW / hp	256 / 348
Gross (ISO 14396/SAE J1995)	kW / hp	265 / 360
Max torque at	Nm / r/min	1800 / 1400
No. of cylinders		6
Displacement	l	12.8
Bore	mm	131
Stroke	mm	158

		EC480DL
Electrical system		
High-capacity electrical system that is well protected. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information.		
Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	200
Alternator	V / Ah	28 / 80
Swing system		
The swing system uses an axial piston motors. driving a planetary gearbox for maximum torque. An automatic holding brake and anti-rebound valve are standard.		
Max. slew speed	r/min	8.8
Max. slew torque	kNm	166.3
Drive		
Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc. spring-applied and hydraulic released. The travel motor. brake and planetary gears are well protected within the track frame.		
Max. drawbar pull	kN	330
Max. travel speed	km/h	3.1 / 5.1
Gradeability	°	35
Undercarriage		
The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.		
Track shoes		2 x 52
Link pitch	mm	215.9
Shoe width. triple grouser	mm	600/700/ 800/900
Shoe width. triple grouser (HD)	mm	-
Shoe width. double grouser	mm	600
Bottom rollers		2 x 9
Top rollers		2 x 2

		EC480DL
Hydraulic system		
The hydraulic system. also known as the “Automatic Sensing Work Mode”. is designed for high-productivity. high-digging capacity. high-maneuvering precision and excellent fuel economy. The summation system. boom. arm and swing priority along with boom and arm regeneration provides optimum performance. The following important functions are included in the system: Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity. Boom priority: Gives priority to the boom operation for faster raising when loading or performing deep excavations. Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging. Swing priority: Gives priority to swing functions for faster simultaneous operations. Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity. Power boost: All digging and lifting forces are increased. Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.		
Main pump. Type 2 x variable displacement axial piston pumps		
Maximum flow	l/min	2 x 358
Pilot pump. Type Gear pump		
Maximum flow	l/min	1 x 32
Hydraulic motors		
Travel: Variable displacement axial piston motor with mechanical brake		
Slew: Fixed displacement axial piston motor with mechanical brake		
Relief valve setting		
Implement	MPa	32.4 / 35.3
Travel circuit	MPa	32.4
Slew circuit	MPa	25.8
Pilot circuit	MPa	3.9

		EC480DL
Hydraulic cylinders		
Mono boom		2
Bore x Stroke	ø x mm	165 X 1 590
Arm		1
Bore x Stroke	ø x mm	190 x 1 850
Bucket		1
Bore x Stroke	ø x mm	165 x 1 330
ME bucket		1
Bore x Stroke	ø x mm	175 x 1 335
LR Bucket		1
Bore x Stroke	ø x mm	140 x 1 140
Service refill capacities		
Fuel tank	l	685
Hydraulic system. total	l	520
Hydraulic tank	l	270
Engine oil	l	42
Engine coolant	l	60
Swing reduction unit	l	2 x 6
Travel reduction unit	l	2 x 6

Cab

The operator’s cab has easy access via a wide door opening.
The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility.
The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door.
Integrated air-conditioning and heating system:
The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.
Ergonomic operator’s seat:
The adjustable seat and joystick console move independently to accommodate the operator. The seat has 12 different adjustments plus a seat belt for the operator’s comfort and safety.

Sound Level		
Sound level in cab according to ISO 6396		
LpA	dB(A)	73
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009		
LwA	dB(A)	106

PREMIUM SERVICES.
AN ECOSYSTEM OF VALUE.

SITE EFFICIENCY & PREPARATION

The key to mobility and productivity is site maintenance. The majority of issues with equipment and vehicles arise at sites and it is important to be able to address them at the site to be able to assure maximum productivity. Caring for haul roads and removing obstacles is crucial for site safety and to prevent machine damage. With a wide range of service and support services, including remote assistance and on-site support, Volvo Trucks provides you with a competitive edge when it comes to maintaining your site operations.



UPTIME CENTER

At Volvo Trucks, we don’t just deliver trucks, we deliver an entire ecosystem of profitability. We offer you everything you need to keep your business moving forward. Every second of save uptime means increased revenue, maximized efficiency and new opportunities. At the State-of-the-art Volvo Uptime center, dedicated teams and technology join in to help you manage unplanned repairs, no matter where your trucks may be. With various features like Dynafleet, Volvo Service and Planning, Remote diagnostics, Predictive maintenance, Fleet uptime and Vehicle Action Service, Volvo Trucks helps you achieve the best in productivity.



DYNAFLEET

The ultimate in fleet networking, Dynafleet is an application that helps you keep track of your trucks, their condition and their operations in real-time, day in and day out. It helps you keep track of your drivers, their driving efficiency and their productivity.What’s more, Dynafleet is an overarching system that is in every part of your Volvo Truck. At Volvo Trucks, we provide you elaborate data on what your trucks are doing, their operational conditions, their location in real-time, their consumption, their fuel efficiency and much more.

VOLVO FINANCIAL SOLUTIONS

At Volvo Trucks, we offer attractive financial solutions that are smart and flexible. We have customized solutions for every kind of operation and ones that are adapted to every individual business need. From a single truck to an entire fleet, new or used, our finance specialists will find a solution for you. Trucks, service, parts and finance. Depending on whatever your requirement is, we offer customized solutions for every kind of operation. At Volvo Financial solutions, we offer customized solutions and a credit line independent of banks so you can use your credit lines for your individual business needs.





COMPETENCE DEVELOPMENT PROGRAMS

When you buy a Volvo Truck, you get access to an ecosystem that lets your machine get the maximum profit and growth. We always care about your ownership. Today and tomorrow. We have a range of programs like our Driver Development Program that are aimed at developing a system of efficiency, safety and productivity with drivers. At Volvo Trucks, we firmly believe that drivers are the most important stakeholders when it comes to profitability and we have dedicated an inordinate number of resources and efforts to ensure that they deliver to the best of their abilities and develop the best of their skills.



GENUINE VOLVO PARTS

Volvo Trucks are some of the most finely engineered machines in the world. The reason they perform so well is the technology embedded in them, their durability, their resilience and their ability to criss-cross any kind of terrain to be able to deliver maximum productivity. The core reason they are able to do so is the technology embedded in them. The best way to continue to derive the best usage of Volvo Trucks is to help them live up to their true potential. Volvo Genuine parts help you keep your Volvo Trucks performing to the best of their abilities. Whenever you need spares. We are ready with the genuines.

RENOVATION

When it comes to genuine Volvo Parts on old fleets, it tends to get expensive. At Volvo trucks, we realized that the cost of parts doesn't have to be a burden for you. That's why we have invested in an ecosystem that generates refurbished parts for your Volvo Trucks that helps you derive the best out of your machines for years to come. Volvo Trucks genuine refurbished parts carry a warranty. They will help your truck retain the same maximum productivity and efficiency that they have been known to deliver through their lifetimes.



COUNTRY WIDE NETWORK

At Volvo Trucks, we have created an elaborate countrywide network to provide the best aftermarket services and the best service support to our solutions operating out of coal mines across India. With an elaborate ecosystem of service support and an elaborate network of Volvo Certified technicians, the Volvo promise of efficiency, productivity and maximum uptime is a valuable promise that cannot be overlooked. When it comes to uptime, we have it all overlooked. Trust us when it comes to productivity. We deliver like no one els

