VOLVO

Volvo Rigid Haulers 55.0 t 772 hp

R60

Volvo Construction Equipment

R60

Intended for quarrying and mining applications, the R60 rigid hauler is designed to maximize tons of material moved per hour at the lowest possible cost.

Productivity

- 55-tonne payload, 36.04 m^3 volume
- V-shape body for optimum load retention
- Fast body-tipping system
- High drive axle multiplication: excellent tractive effort and incline performance
- 61 km/h top speed
- 10/10/20 payload policy, supported by On-Board Weighing system (option)
- A match to EC950F and L350H
- Design promotes excellent stability and maneuverability

Fuel efficiency

- Dynamic Shift Control: automatic adaptive gear selection
- Selectable Eco mode
- Auto engine idle shut down
- Include payload sensitive shifting (when connected to optional on-board weighing system)
- HVO compliant

High productivity, low cost of operation

Boost your profits in the Volvo R60. The hardworking and hardwearing rigid hauler is packed with high productivity, low maintenance requirements and long service life. These, combined with a comfortable cab environment and a host of safety-focused features, make this machine your best choice for quarrying and mining operations.

Comfort

- Cab access from both sides
- Outstanding visibility: large windscreen, low raked dashboard, left-positioned operator station, optional 360° Volvo Smart View
- Independent suspension and viscous mounted cab
- Adjustable air-suspended seat and steering wheel
- Effortless ergonomic control layout
- Powerful Heating, Ventilation and Air-Conditioning system
- Bluetooth, ample storage space
- Operator cab with pressurized properties
- Independent suspension and viscous mounted cab - reduces vibrations and impacts while harmonizing noise

Safety

- ROPS/FOPS-certified cab with pressurized properties
- Anti-slip steps, secure walkways
- Selectable transmission retarder, Gear dependent speed control
- Transmission overspeed protection
- Fail-safe braking and secondary steering
- Neutral coast inhibitor
- Ground level tag out switch
- Emergency shutdown switch
- Body up movement limiter
- Adaptable top speed restriction

Serviceability and uptime

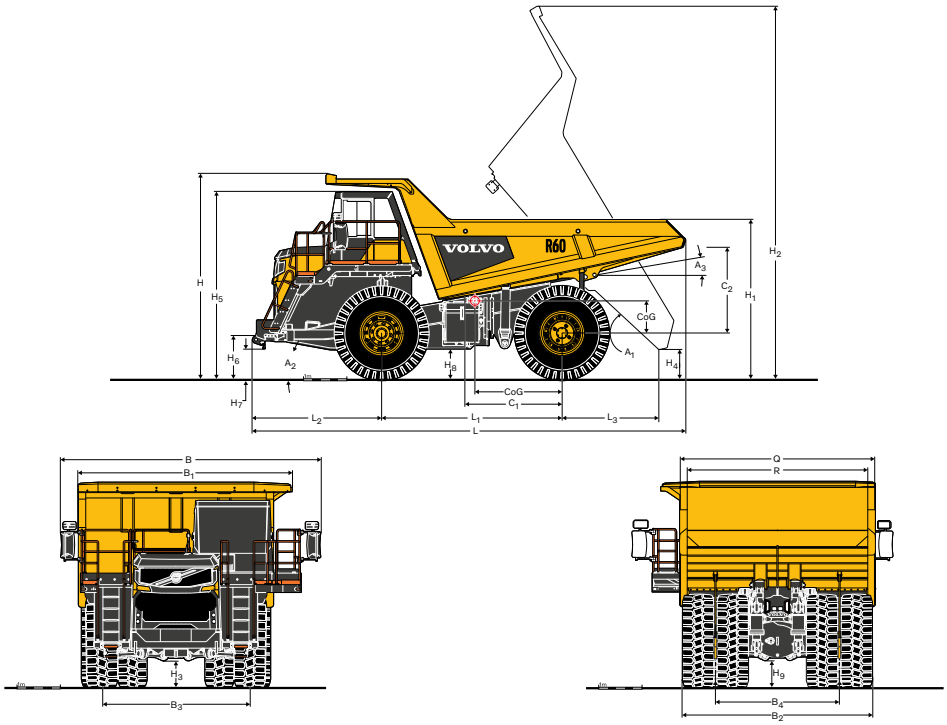
- Maximized component lifecycles
- 500 hr service intervals
- On-board diagnostics
- Straightforward service access
- Common-sized bearings
- CareTrack telematics system for remote monitoring
- Grouped service points
- Aspirated engine air cleaners
- Magnetic hydraulic suction filters
- Pressure filters on the main hydraulic circuits
- Machine operational safety inhibitors

Volvo R60 in detail

Engine		
Model		CumminsQSK 19, CAC, (EU Stage V) (EPA Tier4 f) , 567kW
Type		Electronic control, four cycle, direct injection, turbo charged and charge air cooled, high-speed electronic control module (ECM) isolated from detrimental vibration loading, fully sealed wiring harness, with fail-safe connectors integrates the ECM with engine sensors for optimised engine performance, monitoring and protection. DEF and SCR emmision control
Cylinder/configuration		In line 6 cylinder
Displacement	l	19
Bore x Stroke	mm	159
Max. power at	r/min	2 100
Gross power (SAE J1995)	kW	567
	hp	772
Net power	kW	526
	hp	715
Max. torque at	r/min	1 500
Gross torque	Nm	3 084
Engine emissions		USA EPA Tier 4f and EU Stage V emissions standards
Electrical		24 V negative ground, Two 12 volt 170 Ah batteries
Steering System		
Primary steering pressure is supplied by a pressure compensating piston pump supported by an independant nitrogen charged hydraulic accumulator. The accumulator circuit provides instant, uniformed steering response regardless of engine speed. Pilot operated remote mounted orbitrol control valve delivers light, responsive steering control. Secondary steering is provided by an independant nitrogen charged hydraulic accumulator.		
Maximum tire steering angle	°	
SAE turning radius	mm	20 400
Clearing radius	mm	22 500
Axles		
The rear wheels are driven through single reduction drive axle. Torque multiplication takes place through the beveled gear differential, then transmitted through fully floating shafts to the planetary reduction gears in the wheel hubs.		
Differential ratio		3.73:1
Planetary reduction		5.80:1
Overall drivetrain reduction		21.63:1
Frame		
Fabricated from box-section steel rails with high strength steel castings in key stress locations absorbing the worksite impacts for long durable life cycles. The closed “horse collar” allows for flexibility in the frame to dissipate twists and loads while incorporating a reserve of structural strength well in excess of that required to absorb the stresses imposed by impact loading when travelling on uneven, high rolling resistance applications. Fuel and hydraulic tanks suspended mounts off the frame.		
Body		
V-shaped that provides excellent centre of gravity for load profile stability on all hauling conditions. Manufactured from high abrasion resistant steel (Hardox 400) for superior lifecycles. Horizontal side stiffeners dissipate shock loads accross the entire side plate. Mounted on floating pins for minimal structural stress during empty and full transportation. NB: Hardox 400 specification Body steel 360-440 BHN Body yeils strength 1000 Mpa Body tensile strenght 1,250 N/mm²		
Plate thickness		
Floor	mm	19
Sides	mm	10
Front	mm	10
Body volume		
Stuck	m³	25
Heaped 2:1 (SAE)	m³	36
Tires and Rims		
Tires type		24:00-35
Rims		17
Sound Level		
Interior sound level according to ISO 6396		
L_{pA}	dB	76
L_{WA}	dB	101

Drivetrain		
Transmission		Allison 6620 ORS
Assembly		Planetary gear type transmission with intergral torque convertor and hydraulic fluid retarder. Electronic controlled connected to engine system via CANBUS. Automatic lockup in all ranges. Mounted mid chassis for ease of access and excellent weight distribution.
Electronic control		CEC5
Maximum speed, forward/reverse		
1st gear	km/h	10
2nd gear	km/h	16
3rd gear	km/h	21
4th gear	km/h	32
5th gear	km/h	43
6th gear	km/h	60.6
Suspension		
Front: Independent self contained Macpherson type, variable rate (Nitrogen/oil) suspension strut with lower wishbone. Widley spaced wheel track for high levels of machine stability and easy machine manoeuverability. **Rear:** Independent self contained variable rate (Nitrogen/oil) suspension struts. The strut is mounted between the chassis and axle. The axle is mounted via trailing A frame and lateral stabilizing bar.		
Maximum front strut stroke	mm	242
Maximum rear strut stroke	mm	140
Brake system		
Fulfills ISO 3450:2011, Braking - Wheeled or High-Speed Rubber Tracked Machinery		
Front brakes type		Independant hydraulic apply, dry single caliper, Incorporating independent nitrogen/hydraulic pressure accumulator for instant response and reserve pressure.
Front brake diameter	mm	711
Front brakes lining area	cm²	1 394
Rear brakes type		Independent force cooled, oil emmersed, multi-disc enclosed brakes. Two piston service and park/emergency brakes. Emergency brake spring-applied hydraulic release (SAHR). Service brake is also used for rear brake retardation for safe machine control.
Rear brake lining area	cm²	47 151
Hoist		
Fulfills ISO 4413:2010, Fluid Power Systems - Safety - Hydraulics		
System relief pressure	MPa	24
Pump output flow rate	l/min	336
at	r/min	2 100
Body raise time	s	10
Body lower time	s	15
Service Refill		
Engine crankcase and filters	l	65
Transmission and filters	l	90
Cooling system	l	160
Fuel tank	l	770
DEF/AdBlue® tank	l	57
Steering hydraulic tank	l	302
Steering hydraulic system (total)	l	380
Planetaries (total)	l	58
Differential	l	95
Front ride strut (each)	l	12.4
Rear ride strut (each)	l	7.2
Power take off	l	2
Weights		
Chassis with hoists	kg	35 469
Body standard	kg	9 991
Net weight	kg	45 460
Maximum payload	kg	55 000
Maximum gross weight*	kg	100 460
- Empty	%	48 / 52
- Loaded	%	32 / 68

Specifications



DIMENSIONS

Description		Unit	R60
H	Overall height	mm	4 606
H_1	Loading height	mm	3 675
H_2	Raise height	mm	8 591
H_3	Front axle ground clerance	mm	662
H_4	Tail clearance	mm	675
H_5	Cab height	mm	4 315
H_6	Bumper ground clearance (no TH)	mm	971
H_7	Ladder ground clearance	mm	417
H_8	Frame ground clearance (hoist)	mm	690
H_9	Rear axle ground clearance	mm	665
B	Overall width (outside of mirrors)	mm	5 921
B_1	Body width	mm	4 496
B_2	Rear over tires	mm	4 381
B_3	Front track	mm	3 384
B_4	Rear track	mm	2 856
L	Overall length	mm	9 992
L_1	Wheel base	mm	4 170
L_2	Center front axle to bumper	mm	2 986
L_3	Center rear axle to tipped tail	mm	2 426
SAE_{TR}	SAE turning radius	mm	20 400
C_{TR}	Clearance turning radius	mm	22 500
A_1	Body dump angle	°	47
A_2	Approach angle	°	21 (to guard)
A_3	Frame angle	°	10
C of G	from the centre of the rear axle, unladen - horizontal	mm	2 063
C of G	from the centre of the rear axle, unladen - vertical	mm	751
C of G	from the centre of the rear axle, laden (2:1 heaped) - horizontal	mm	1 378
C of G	from the centre of the rear axle, laden (2:1 heaped) - vertical	mm	1 638

Vehicle measurements assumptions / variables

Measurements to be taken on flat ground
Truck should be unladen
Bridgestone VRLS Tires should be used
Tire pressure should be set as per manual
Suspension should be set at normal operating height

Equipment

STANDARD EQUIPMENT
Engine
Air cleaner with aspirator (vacuum)
Turbocharged and charge air cooler
Direct drive fan
Electronically controlled with Shift Energy Management (SEM)
Engine safe mode
Fuel filter/water separator
Sump guard
Engine idle shut down
Engine enclosures (rubber)
Tires
Standard tires 24:00-35
Drivetrain
Full automatic transmission with manual override
Shift Energy Management
Torque converter with automatic lockup
Volvo Dynamic Shift
Electrical system
Alternator
Batteries
Battery disconnect switch (tag lock out)
Emergency engine shutdown (ground level)
Direction indicators and hazard warning
Lights - side, tail, stop and headlights
LED tail lamps
Power ports - 12V and 24V
Reverse alarm
Reverse lights
ECO mode
Auto retard
Brake system
Hydraulically operated system with independent front and rear control systems
Park brake - electric switch, spring applied hydraulic release
Retardation - finger tip control of transmission retarder or lever mounted on the steering column giving modulated pressure control of the rear oil cooled brakes
Body
Rock ejectors

STANDARD EQUIPMENT
Safety and security
Anti-slip steps and platforms
Body down indicator
Body - operator guard LHS
Body - up locking pins
Body - up reverse to neutral inhibitor
Body - up shift inhibitor
Brakes - independant front and rear systems
Emergency SAHR brake
Battery disconnect switch (tag lock out)
Engine diconnect switch (Tag lock out)
Emergency engine shutdown (ground level)
Cab - ROPS and FOPS
Electro magnetic compatibility
Handrails on steps and platform
Horn
Neutral start inhibitor
Engine overspeed protection
Neutral coast inhibit
Programmable max. travel speed
Operator safety belt
Operator's field of view
Rear view mirrors
Retarder - transmission
Retarder - rear brake
Secondary steering
Instructor's seat with safety belt
Vibration 2002/44/EC
Windscreen washers
Windscreen wipers
Comfort
Air suspended seat
Heating, Ventilation and Air Conditioning - HVAC
Interior lights
Radio - Bluetooth
USB power take-off
Cup holder
Insulation thermal and acoustic
Storage compartments
Sun visor
Tilt/telescopic steering wheel
Tinted glass
Operator information interface
MacPherson type front suspension with lower wishbone
Exterior
Mud flaps
Diagnostic terminal
Front and rear tow points
Service and maintenance
Pressure check points

OPTIONAL EQUIPMENT
Engine
Fast fuel
Inline fuel heater
Tires
Bridgestone
VMTP
VZTS
VRLS
Michelin tires
XDTA-4
XKD1-A
E4RTL
Goodyear
RL4J
23775
Belshina
FBEL 150
BEL 202
BEL 122
Techking
ETDT2
Magna
MAO4A
Drivetrain
Transmission sump guard
Drive line guard
Traction bias differential
Electrical system
Heated and adjustable electrical mirrors
LED headlamps
Froward work lamps
Rear work lamps
Care track telematics
Cab
Amber flashing beacon
HEPA filter
Body
Onboard Weighing System
Pay load indicator lights
Body Exhaust Heating
Spill guard
Body Extensions upon request
Body liner plates (available with full weight or half weight)
RHS canopy extension
Safety and security
Fire suppression system
Smart view (360 degree camera system)
Orange flashing beacon
Service and maintenance
Quick oil drain kit
Central autolube
Service lights

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.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