

**V O L V O**



Volvo Compact Wheel Loaders 5.5-6.1 t 75 hp

**L356**

Volvo Construction Equipment

# L356



# Ultimate performance



## Fast cycle times

- Articulated oscillating joint and 100% different locks secure outstanding traction
- Portal axles design provides industry-leading ground clearance
- Independent hydraulic pumps enable simultaneous lifting and steering with no impact on boom speed
- Z-bar delivers high-breakout force and excellent parallel movement for bucket and forks applications



## Versatility

- Compact design minimizes transit time
- Volvo attachments brackets: efficient attachment changes
- Range of matched Volvo buckets, forks, grapples and material handling arms



## Easy and safe operation

- All-round visibility
- Adjustable steering column
- Single inching braking pedal
- FOPS/ROPS certified cab



## Enhanced uptime

- 100 hours lift frame greasing interval
- Easily accessed service points
- Genuine Volvo Parts: retain Volvo quality
- Control service costs with a Customer Support Agreement

# L35G in detail

## Engine

Volvo 4-cylinder, common rail, diesel engine compliant to EU Stage V environmental regulations.

Maximum engine incline is 30 degrees in all directions.

### Air cleaning:

1. Paper filter with indicator in cab
2. Safety filter

### Exhaust after treatment system:

Cooled Exhaust Gas Recirculation (EGR), diesel oxidation catalyst (DOC) and diesel particulate filter (DPF).

Engine	Volvo	D3.3H
Max power at	r/min	2 600
SAE J1995 gross	kW	55.4
	hp	75
Max. torque at	r/min	1 500
SAE J1995 gross	Nm	265
Economic working range	r/min	1 300 - 2 100
Displacement	l	3.3
Bore	mm	98
Stroke	mm	120

## Electrical System

Contronic electrical system with central warning light and buzzer, providing clear and easy to read information to the operator.

A keypad allows easy navigation on the central LCD display with main and sub information field.

Indicators and activation lights are available for various control and monitoring functions.

An audible warning alarm will sound and a central warning indicator will flash if abnormal operating values or error messages arise.

Gauges are available for coolant temperature and fuel level.

A fuse test port is available in the fuse box, allowing operators to perform initial investigations, reducing diagnostic time.

Voltage	V	12
Batteries	V	1
Battery capacity	Ah	100
Alternator rating	W/A	1 260 / 90
Starter motor output	kW	3

## Drivetrain

The hydrostatic transmission allows for speed range change without any tractive power interruption.

Maximum tractive power is available in all speed ranges, regardless of the driving direction.

Single "Inch/brake pedal" for variable machine speed control and easy power transfer to the wheels at constant engine rpm.

Transmissions forward, neutral, reverse and differential locks buttons are all easy to reach on the multifunctional right joystick. This allows excellent ergonomics and greater efficiency in all applications thanks to the single-handed operation of the machine.

Two rigid portal axles provides long durability and best in class ground clearance.

The central articulating-oscillating joint and all wheel drive allows excellent mobility in all ground conditions.

The 100% differential lock on both axles enable low tire wear on hard ground while maximizing traction force in soft terrain.

Angle of oscillation	± °	10
Oscillation at wheel, max.	mm	270
Track	mm	1 532
<b>Travel speed, forward/reverse</b>		
1st gear	km/h	6
2nd gear	km/h	20
<b>Low-speed version</b>		
1st gear	km/h	6
2nd gear	km/h	20
<b>High-speed version</b>		
1st gear	km/h	8
2nd gear	km/h	30

## Tires

Size	405 / 70 R20
------	--------------

## Linkage

Z-bar linkage providing high breakout force to the bucket and also parallel movement to the fork frame thanks to Volvo's specific kinematics. Torque parallel (TP) linkage also available as an option to provide greater breakoutforce throughout the entire tilt angle.

Linkage system	Z-bar	
Lift cylinders	2	
Tilt cylinders	1	
Lift time (loaded)	s	5.5
Lowering time (empty)	s	3.5
Dump time	s	1.2

## Brake system

**Service brake:** an Inching-brake pedal provides hydrostatic wearless braking in the first stage for precise approach; if applied further the central disk brake takes over for final braking and machine immobilization.

**Parking brake:** Mechanically activated central drum brake, located on the rear axle dropbox and acting upon all four wheels.

## Steering System

Central articulating-oscillating joint with Elastica end-stops.

Hydrostatic steering powered via a dedicated gear pump allowing precise operation even at low engine revolutions: steering the machine does not influence the working hydraulic speed e.g. when lifting loads.

Steering cylinders	1	
Working pressure	MPa	19
Maximum flow	l/min	33.5
Max articulation	± °	40



### Cab

The cab is tested and approved according to ROPS (ISO 3471, SAE J1040) and FOPS (ISO 3449). The cab is compliant with ISO 6055 requirements regarding Operator overhead protection - Industrial trucks and SAE J386 regarding Operator Restraint System. The operator's seat features an adjustable suspension and a retractable seatbelt. Fresh air is filtered through a large elements prior entering, ensuring extremely clean air distribution in the cab. Several air vents enables fast de-misting and defrosting. The conronic monitoring system provides all important information in a central position and all machine controls are located in the operator's field of vision.

### Sound Level

Sound pressure level in cab according to ISO 6396:

L <sub>pA</sub>	dB	75
-----------------	----	----

External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC:

L <sub>WA</sub>	dB	101
-----------------	----	-----

### Service Refill

Ground level access, fuel filler and hydraulic oil filler well protected under the rear engine hood.

Fuel tank	l	84
Engine oil	l	11.2
Engine coolant	l	11
Hydraulic tank	l	54
Front axle oil	l	12.2
Rear axle oil	l	13.5

### Hydraulic system

Working hydraulic system with pilot operated control valves.

**System supply:** A gear pump provides flow to the working hydraulic.

**System control:** Double-acting 3-spools main control valve.

**The lift function has four positions:** lift, hold (neutral), lower and float position.

**The tilt function has three positions:** rollback, hold (neutral) and dump.

The third hydraulic function has three positions: unlock attachment, neutral and lock attachment. It can power a hydraulic attachment such as sweeper, 4-in-1 bucket. A fourth hydraulic funtions is available as options to power hydraulic implements (Hi-Tip bucket, angle sweeper etc...)

**Filtration:**

Full-flow filtration through 10 micron (absolute) filter cartridge in a combined suction-return-filter.

**Cooling:**

Thermostatically controlled oil flow to oil cooler (fast warm-up, optimized cooling).

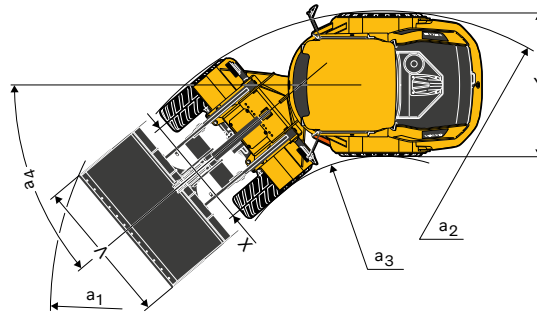
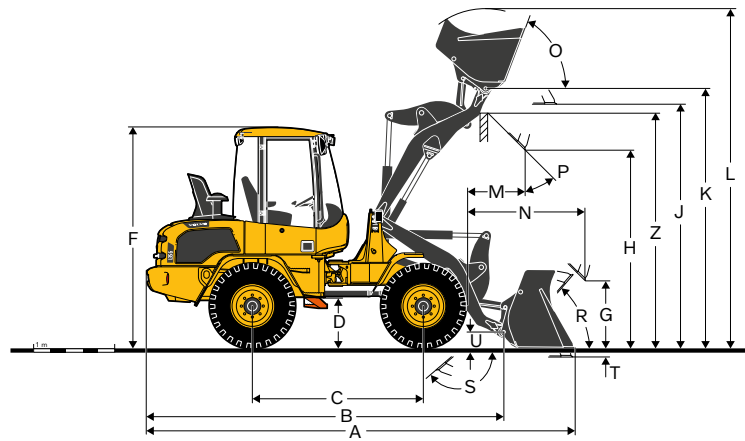
Working pressure max	MPa	24
----------------------	-----	----

Flow	l/min	69
------	-------	----

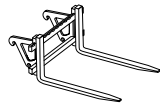
at engine speed	r/min	2 600
-----------------	-------	-------

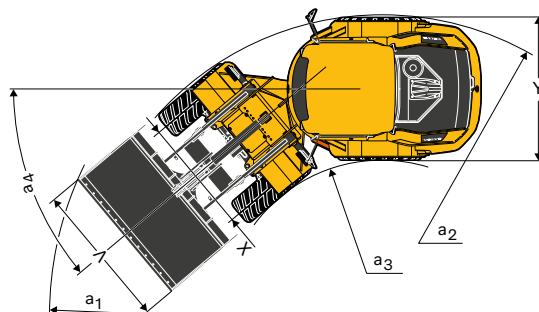
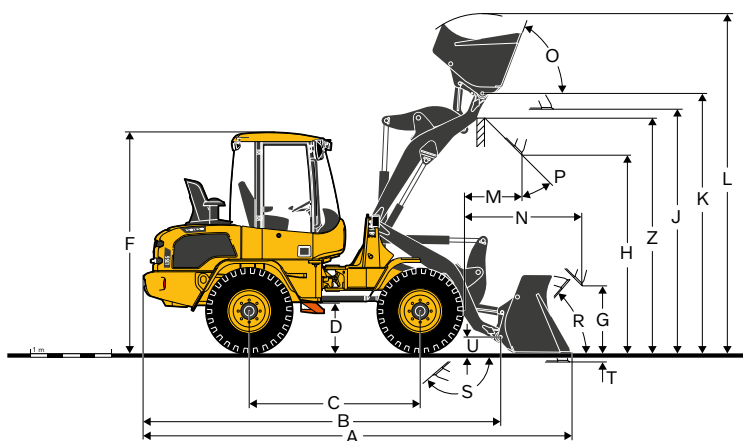


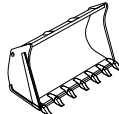
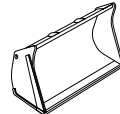
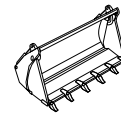
# Specifications



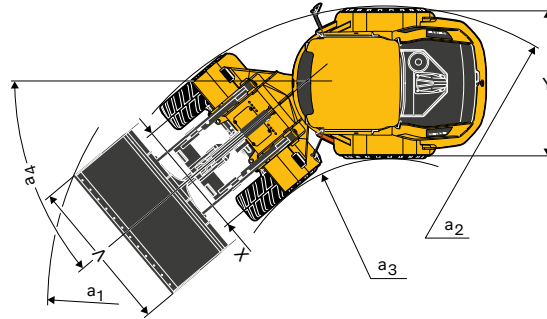
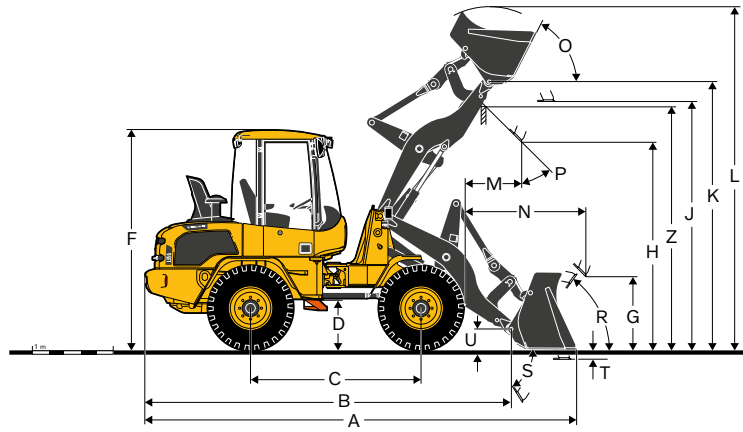
Description	Unit	L35G Z-BAR
		with 405/70 R20 tires
B	mm	4 485
C	mm	2 150
D	mm	610
F	mm	2 745
G	mm	900
J	mm	3 145
K	mm	3 345
O	°	66
P	°	45
R	°	50
S	°	135
U	mm	200
X	mm	1 532
Y	mm	1 932
Z	mm	3 050
a <sub>2</sub>	mm	3 960
a <sub>3</sub>	mm	1 980
a <sub>4</sub>	°	±40

Description	Unit	L35G Z-BAR	
		FEM II	FEM III
With Loading Fork Centre of gravity 500mm			
Tipping load, full turn (ISO / DIS)	kg	3 340	3 300
Payload according to EN 474-3, 60/80%	kg	2 000 / 2 500	2 000 / 2 600
Payload 80%, transport position, 40° full turn	kg	2 500	2 800

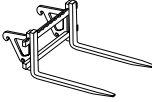


Description	Unit	L35G Z-BAR		
		GENERAL PURPOSE	Light material bucket	4-in-1
with 405/70 R20 tires				
Capacity heaped	m <sup>3</sup>	1.2	1.5	1
Material density	kg/m <sup>3</sup>	1 800	1 200	1 900
Static tipping load, straight (ISO / DIS)	kg	4 950	4 650	4 450
Static tipping load, full turn 40° (ISO / DIS)	kg	4 350	4 050	3 950
Hydraulic lifting capacity, max.	kN	61.5	57.5	58.5
Breakout force	kN	60.5	43.5	52.5
A Total length	mm	5 420	5 690	5 520
L Lift height, max.	mm	4 320	4 500	4 260
V Bucket width	mm	2 100	2 000	2 000
a <sub>1</sub> Clearance circle	mm	8 760	8 825	8 740
T Digging depth	mm	95	95	100
H Dump height	mm	2 670	2 470	2 570
M Reach at max. height	mm	750	935	780
N Reach, max.	mm	1 570	1 755	1 600
Operating weight	kg	6 100	6 200	6 440

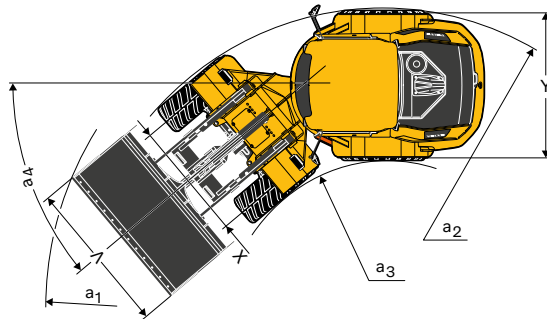
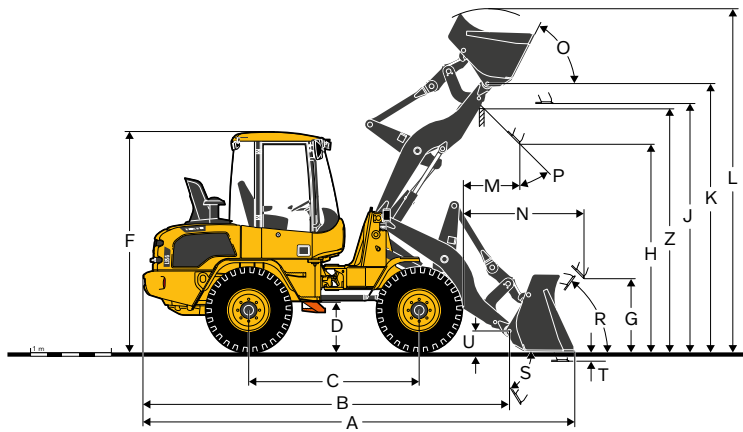
# Specifications



Description	Unit	L35G TPZ	L35G TPV
		L35G with TPZ-attachment carrier and 405/70 R20 tires	L35G with TPV-attachment carrier and 405/70 R20 tires
B	mm	4 595	4 595
C	mm	2 150	2 150
D	mm	580	580
F	mm	2 715	2 715
G	mm	900	850
J	mm	3 100	3 100
K	mm	3 350	3 350
O	°	63	63
P	°	45	45
R	°	50	50
S	°	58	58
U	mm	250	250
X	mm	1 532	1 532
Y	mm	1 932	1 932
Z	mm	3 020	3 100
a <sub>2</sub>	mm	3 960	3 960
a <sub>3</sub>	mm	1 980	1 980
a <sub>4</sub>	°	±40	±40

Description	Unit	L35G TPZ	L35G TPV
With Loading Fork Centre of gravity 500mm			
Tipping load, full turn (ISO / DIS)	kg	2 930	2 750
Payload according to EN 474-3, 60/80%	kg	1 750 / 2 300	1 650 / 2 200
Payload 80%, transport position, 40 ° full turn	kg	2 500	2 500





Description	Unit	L35G TPZ			L35G TPV			
		GENERAL PURPOSE	Light material bucket	4-in-1	GENERAL PURPOSE	Light material bucket	4-in-1	
L35G with TPZ-attachment carrier and 405/70 R20 tires								
	Capacity heaped	m <sup>3</sup>	1	1.2	0.9	1	1.2	0.9
	Material density	kg/m <sup>3</sup>	1 800	1 500	1 900	1 800	1 400	1 800
	Static tipping load, straight (ISO / DIS)	kg	4 200	4 150	3 900	3 950	3 900	3 750
	Static tipping load, full turn 40° (ISO / DIS)	kg	3 700	3 650	3 450	3 500	3 450	3 300
	Hydraulic lifting capacity, max.	kN	57	55.5	54	52	50.5	49
	Breakout force	kN	62.5	54.5	59	54.5	48.5	51.5
A Total length	mm	5 420	5 520	5 460	5 520	5 620	5 555	
L Lift height, max.	mm	4 290	4 330	4 200	4 250	4 390	4 260	
V Bucket width	mm	2 000	2 000	2 000	2 000	2 000	2 000	
a <sub>1</sub> Clearance circle	mm	8 670	8 730	8 700	8 730	8 800	8 760	
T Digging depth	mm	90	90	90	85	85	85	
H Dump height	mm	2 610	2 535	2 560	2 550	2 470	2 490	
M Reach at max. height	mm	725	785	715	800	855	785	
N Reach, max.	mm	1 545	1 605	1 535	1 620	1 678	1 600	
Operating weight	kg	5 950	5 970	6 135	6 050	6 090	6 240	

# Equipment

## STANDARD EQUIPMENT

### Engine

- Diesel engine, water cooled
- Engine with diesel oxidation catalyst (DOC) and diesel particulate filter (DPF)
- Extra fuel filter
- Cold start aid
- Dry-type air filter

### Drivetrain

- Hydrostatic drive
- Operator-selected 100% differential locks
- Tires 405/70 R20

### Electrical System

- Alternator 90 A
- Main head lights (halogen)  
full/dipped/asymmetrical
- Working lights (2 front/1 rear, right)
- Parking lights
- Rear lights
- Brake lights
- Direction indicators
- Hazard warning lights
- Reversing lights
- Cab lighting

### Hydraulic system

- Gear-type pump
- Control valve three-spool system
- 3rd hydraulic circuit

### Instrumentation & controls

- Multi-function lever
- 12 Volt accessories socket
- Horn
- Hazard warning switch
- Safety start
- Analog LED-information for:
  - Fuel level
  - Engine temperature
- LED-illuminated symbols (colour-coded) for:
  - Direction (forward/reverse)
  - 2nd gear
  - Indicators (left/right)
- Pre-heater
- Main beam
- Differential locks
- LED-illuminated symbols (red) with acoustic signal for:
  - Parking brake
  - Air filter restriction
  - Engine temperature
  - Engine oil pressure
  - Battery charging
  - Return filter
- Touch pad with symbols and integrated LEDs for:
  - Parking lights
  - Working lights (front/rear)
  - Windscreen wiper (rear)
  - Rotating beacon
  - Boom suspension system
  - Locking and activation of Volvo attachment carrier (TPV)
  - Activation of directional change on joystick
- Digital LED display activated by dual function keys for:
  - Entry and retrieval of operating information
  - Anti-theft function control

## STANDARD EQUIPMENT

### Cab, Exterior

- ROPS/FOPS-cab with flexible mountings
- Walk-through cab
- Lockable doors
- All-round tinted safety glass
- Windscreen wiper (front/rear)
- Windscreen washer (front/rear)
- Sliding window in the left door
- Door stops
- External rear view mirrors (right/left)

### Cab, Interior

- 4-way adjustable operator's seat
- Adjustable steering column
- Seat belt
- Sunvisor
- Heater with air-filter and defroster (front/rear)
- Cab ventilation
- Preparation for an optional air-conditioner
- Storage box in the cab

### Working Equipment

- Bucket level indicator
- Hydraulic quick-change attachment carrier

### Carriage Body

- Fenders front/rear
- Lockable engine hood
- Towing device
- Lifting eyes

### Service and maintenance

- Tool kit

### Official approval

- Machine conforming to European directive 2006/42/EC
- Electromagnetic compatibility (EMC) conforming to European directive 2014/30/EC
- Noise emissions in the environment conforming to directive 2000/14/EC
- Tipping load and payload conforming to ISO 14397-1
- ROPS conforming to ISO 3471
- FOPS conforming to ISO 3449

---

**OPTIONAL EQUIPMENT**

---

**Engine**

Engine block heater  
Fuel pre-heater  
Pre cleaner air filter (Turbo II)  
Auto Engine Shutdown  
Reversible cooling fan  
Tropical cooling

**Drivetrain**

Hand inch valve  
Driveline shutoff  
Engine overspeeding protection

**Hydraulic system**

Hydraulic coupler for 3rd hydraulic circuit  
4th hydraulic circuit  
Flow share function  
Joystick with integrated 3rd function  
Hyd oil mineral VG46 HV  
Hyd oil mineral VG32 HV  
Hyd oil mineral VG68 HV  
Hyd oil bio synthetic VG46  
Boom suspension system  
Tilt speed limiter mechanical or hydraulic  
Auxiliary hydraulic's return line (direct to tank or via filter)  
Additional pump 42 l/min  
Safety valves lift and tilt cylinders  
Rear hydraulics  
Boom kick out  
Bucket leveler kick out

**Cab**

Airconditioner  
Radio preparation  
Radio AUX/USB/Bluetooth  
Air suspended/heated operator's seat  
Rearview mirrors inside cab  
Enhanced rearview mirrors outside cab  
Heated rearview mirrors  
Auxiliary cab & engine heater  
Orange seatbelt

**Wheel/Tires**

405/70R18  
335/80R20  
360/80R20  
365/80R20  
375/75R20  
400/70R20  
405/70R20  
500/45-22.5  
420/65R24  
455/70R20

---

**OPTIONAL EQUIPMENT**

---

**Electrical**

One additional working light (rear left)  
Magnetic rotating beacon  
Foldable rotating beacon  
Audible reverse alarm  
Anti-theft system  
Daytime running headlight  
LED working lights  
Power outlet 12V 20A

**Protective equipment**

Windshield guard, front  
Windshield guard, rear  
Belly guards, front/rear  
Engine hood protection  
Protective guards for:  
Main head lights  
Working lights  
Rear lights  
Front mudflaps

**Other**

SMV warning triangle  
Preparation for licence plate  
Trailer hitch with electrical connector  
Central Lubrification unit  
Sweeper preparation  
Salt sprayer preparation  
Safety brace

**V O L V O**