

Euclid R36



MAXIMUM GMW
62 560 KG
(137,919 LBS)

MAXIMUM PAYLOAD
36,3 TONNES
(40.0 TONS)

HIGH LOAD CAPACITY-LOW
NET WEIGHT

DIRECT-INJECTED,
TURBOCHARGED VOLVO
DIESEL WITH CHARGE
AIR COOLER

AUTOMATIC TRANSMISSION
TRIM BOOST SOFT SHIFT
TWO-SPEED REVERSE

LOW LOAD HEIGHT

ROCK BODY AS STANDARD
-LOW MAINTENANCE
REQUIREMENT

EFFECTIVE SUSPENSION
AND SHOCK ABSORPTION
-HYDROPNEUMATIC
SUSPENSION CYLINDERS

EUCLID



ENGINE

Volvo TD 162KA, four-stroke direct-injected turbocharged diesel engine with charge air cooler and wet, replaceable cylinder liners.

Cold starter: Cold start aid boosts fuel injection and incorporates starting element to preheat intake air.

Air filter: Cyclone cleaner, main filter of paper type and catch-all safety filter.

Radiator fan: Extraction fan mounted on engine.

Make	Volvo			
Model	TD 162 KA			
Type	4 Cycle			
Aspiration	Turbocharged			
Rated Output (SAE @ 2000 rpm)	kW	bhp	330	442
Flywheel Output (SAE @ 2000 rpm)	kW	bhp	319	427
No. of Cylinders	6			
Bore & Stroke	mm	in	144 x 165	5.7 x 6.5
Displacement	l	in ³	16,1	982
Max. torque @1200 rpm	N•m	lb ft	2 000	1,475
Starting	Electric			



TRANSMISSION

Allison CLBT-5963. Planetary-type transmission with built-in retarder. Integral torque converter, with automatic lock-up in all ranges. This transmission utilizes the Allison Transmission Electronic Control, providing park brake interlock and hoist interlock, as well as built-in diagnostics.

Maximum Speeds @ governed engine speed

Gear	Ratio	km/h	mph
1	4,00:1	11	6.8
2	2,68:1	16	9.9
3	2,01:1	21	13.0
4	1,35:1	31	19.3
5	1,00:1	42	26.1
6	0,67:1	63	39.1
R1	5,12:1	8	5.0
R2	3,46:1	12	7.5



DRIVE AXLE

Axle shafts: Fully floating axle shafts with planetary hub reductions.

Ratios

Differential	3,17:1
Planetary gear	4,94:1
Total reduction, rear axle	15,65:1



TIRES

Standard - Front and Rear
Bridgestone 18.00-33(32) E3

Rim Width
mm in 330 13



LOAD CAPACITY

Load factor	1,38	
Load volume	m ³	yd ³
Struck	17,0	22.2
Heaped, 2:1	23,5	30.7

Payload	Tonne	Ton
Max.	36,3	40.0

Based on material density, optional body side extensions are available.



WEIGHTS

Tires	18.00-33(32) E3	
	kg	lb
Max. GMW (Gross Machine Weight)	62 560	137,919
Net Weight	26 260	57,892
Max. Payload without liners	36 300	80,027
Max. Payload with liners	34 200	75,397
Liners	2 100	4,630
Weight Distribution	FRONT	REAR
Empty	50%	50%
Loaded	32%	68%



BRAKE SYSTEM

Service brakes: Uses dual circuit air-operated drum brakes on all four wheels.

Circuit division: Circuit 1 supplies the front brakes. Circuit 2 supplies the rear brakes.

Parking brake: Separate circuit. Spring-actuated drum brakes on all four wheels.

Compressor Capacity	l/min	US gal/min	430	113.6
At	MPa	psi	0,7	101
And	rps	rpm	33	2,000

Pressure Regulator				
Actuate	MPa	psi	0,75	109
Relief	MPa	psi	0,81	117

Brake Area				
Front/Wheel (each)	cm ²	in²	1 770	274
Rear/Wheel (each)	cm ²	in²	1 770	274
No. of Reservoirs			3	
Total Volume	l	ft³	140	4.94

Parking Brake				
Area	cm ²	in²	7 080	1,097

Retarder: Foot-operated valve activates retarder incorporated into the transmission.

Braking Effect	kW	hp	310	416
At	rps	rpm	33	2,000



SERVICE REFILL CAPACITIES

Service: All vital parts such as engine, transmission, differential and hub reduction are easily accessible for service and maintenance.

	liters	US gallons
Crankcase Oil	60	15.9
At Change	58	15.3
Transmission	85	22.5
At Change	50	13.2
Rear Axle, Total	60	15.9
Cooling System	90	23.8
Fuel Tank	550	145
Hydraulic Tank	75	19.8
Hydraulic System (incl. tank)	110	29



STEERING SYSTEM

Load-sensing hydrostatic steering system of closed-center type.

Steering cylinders: Double-acting, one for each wheel, mounted between the steering knuckle arm and brackets on the front axle.

Hydraulic pump: Engine-driven, variable piston pump mounted on the transmission's power take-off. Priority is always given to the steering system over the tipping system.

Supplementary steering: A supplementary steer pump is activated when the pressure in the system falls below 0,5 MPa **73 psi**.

Lock-to-lock turns			3,8	
Steering Cylinders			2	
Bore	mm	in	63	2.5
Stroke	mm	in	500	19.69
Piston Rod Diameter	mm	in	40	1.57
Relief Pressure	MPa	psi	17,5	2,540



HYDRAULIC SYSTEM

Tipping: One 3-stage telescopic cylinder, two stages are double-acting. Tipping stop built into tipping cylinder.

Hydraulic system: Load-sensing hydrostatic system. Engine-driven piston pump mounted on the transmission's power take-off. Common reservoir for steering and tipping. Steering is always given priority over the tipping system.

Tipping				
Raise Time with Load	s		13	
Lower Time	s		13	

Hydraulic System				
Relief Pressure	MPa	psi	19	2,755
Flow	l/min	US gal/min	201	53.1
At Engine Speed	rps	rpm	33	2,000

STANDARD EQUIPMENT

Body equipment

Body heating (exhaust)
Rock body

Engine and electrical system

Alternator
Electric engine inlet air preheater
Instruments:
air pressure gauge (two circuits)
engine oil pressure gauge
fuel gauge
speedometer
tachometer
transmission oil pressure gauge
transmission oil temperature gauge

Lights:

backup beams
backup lights
cab lights
direction indicators
headlights
bright/dim/asymmetric
instrument lighting
parking lights
tail lights

Pilot lamps for:

body up
bright lights
charging
engine oil pressure
flashers and director indicators
lock-up
parking brake

Hydraulic system

Tipping
One three-stage telescoping cylinder, two-stage double-acting

Safety and comfort

Anti-theft lock
Cab heating with filtered fresh air intake and defroster
Cigarette lighter and ashtray
Ergonomically designed and adjustable operator's seat
Hazard flashers
Horn
Indicator for air cleaner
Instructor's seat
Mud flaps, front wheels
Rear-view mirrors
Reverse alarm
Rock ejectors
Seat belt
Sun visor
Supplementary Steering
Tilt Steering Wheel
Tinted glass
Windshield washers
Windshield wipers

Transmission

Automatic lock-up
Automatic power shift transmission
Retarder

OPTIONAL EQUIPMENT

Body equipment

Body liners
Canopy reinforcement
Top extension 200 mm (7.9 in)

Cab equipment

Air conditioning R134a
Cab heater
Heated operator's seat
Radio/tape player

Engine equipment

Engine heater

External equipment

Heated rear-view mirrors

Other equipment

Rims with wooden protection
Spare rim
Spare wheel
Tool kit

Protective equipment

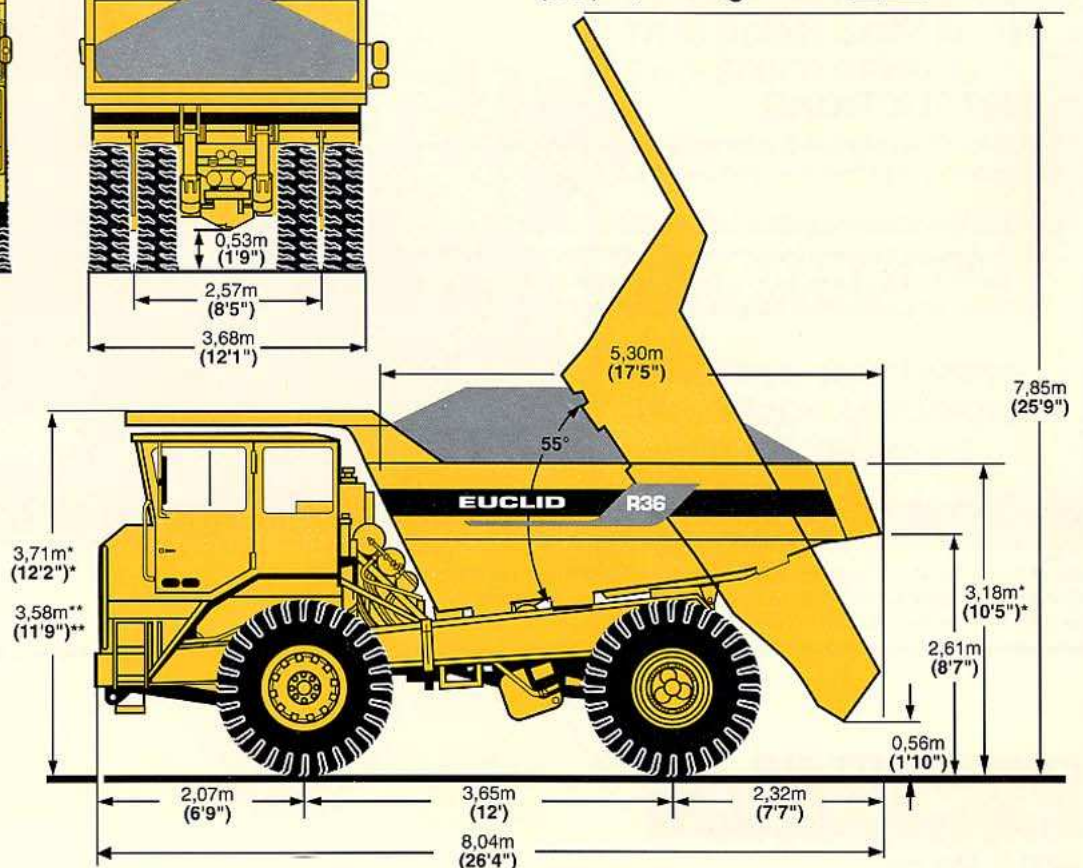
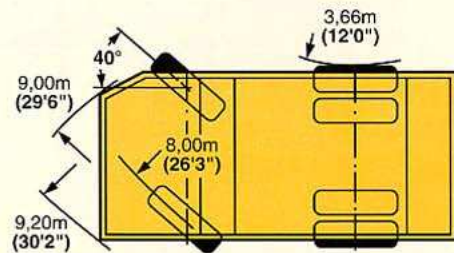
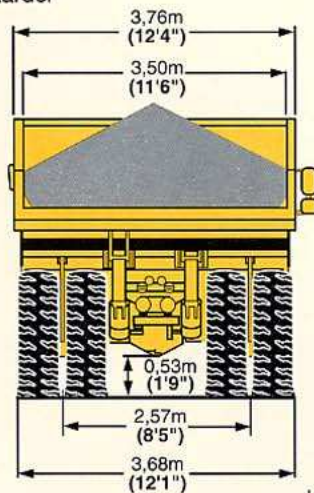
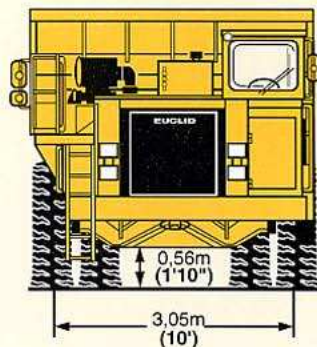
Cab guard
Muffler

Signs

English
French
German
PIN plate, EEC
PIN plate, manufactured in Poland
Polish
Spanish
Swedish

Wheel equipment

Tires 18.00-33 E-4 - Bridgestone
Tires 18.00 R33 - Michelin
XDTA4, XDTB



*unloaded **loaded



FRAME

Robust construction with beams of carefully selected steel grade with high yield strength. Main beams of all-welded box section with a minimum of joints. Cross members, gussets and brackets have smooth junctions to the frame. Stresses are distributed evenly over the entire frame.



SUSPENSION

Same suspension cylinders on all four wheels.

Front axle: A fabricated box beam A-frame connects the wheels to the machine frame through a well-sealed spherical bearing, and gas-over-oil suspension cylinders. This three-point mounted axle provides excellent oscillation and stability.

Rear axle: Similar to the front axle, the rear suspension utilizes an A-frame structure bolted to the rear axle. The assembly is connected to the main frame by a spherical bearing at the front, and two air-over-oil suspension cylinders in the rear.

When the machine is loaded, the main frame rests on the rear axle for maximum stability.



ELECTRICAL SYSTEM

Two 12 V batteries connected in series.

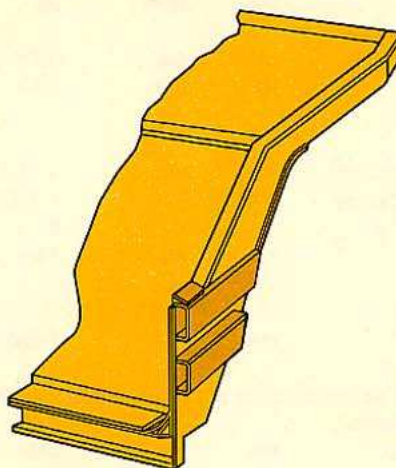
Voltage	V	24		
Battery capacity	Ah	160		
Alternator	W	1,680		
Starter motor	kW	hp	7,5	10.1



BODY

Dumper body: Robust body made of hardened and tempered abrasion-resistant steel plate. The longitudinal stiffeners, made of high-grade steel, eliminate stress concentrations and distribute the force from impacts over the entire length of the body. A flat, sloping floor with rugged, uniformly space stiffeners ensures high durability.

The body is geometrically optimized to provide a compact yet capacious unit with a low load height and a low center of gravity for efficient loading. Rubber pads between body and frame. Exhaust-heated body.



Body				
Tensile strength	N/mm ²	psi	1250	181,265
Hardness	HB		360-440	
Plate Thickness				
Front & Sides	mm	in	10	0.4
Floor	mm	in	20	0.8

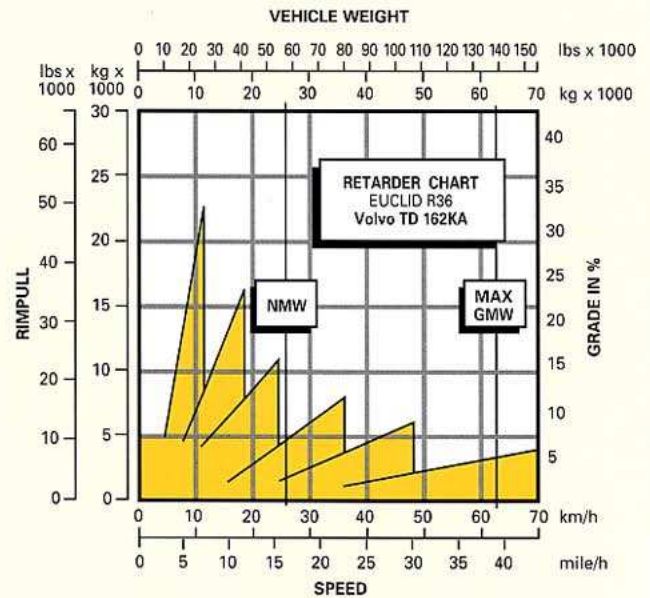
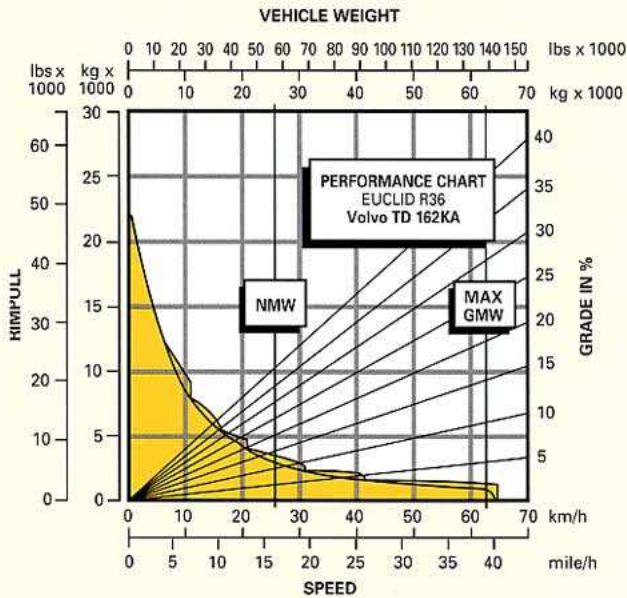


CAB

ROPS-tested and approved steel cab. Cab mounted on rubber pads in the center-of-gravity line. Heat and sound insulated. Heater and defroster. All windows of tinted safety glass.

Operator's seat: Sprung and shock-absorbed with arm rests, head restraint and seat belt. Adjustable to operator's weight. Individual adjustment of both seat and backrest. Seat for instructor.

Sound level in cab max.	dB (A)	75
Operator's seat		ISRI 6000
Number of exits		1



INSTRUCTIONS:

Diagonal lines represent total resistance (grade resistance % plus rolling resistance %). The charts are based on 0% rolling resistance, standard tires and gearing.

- 1 Find the total resistance on the diagonal lines on the right-hand side of the rimpull or braking effort chart.
- 2 Follow the diagonal line down until it intersects the NMW (Net Machine Weight) or GMW (Gross Machine Weight) line.
- 3 Go from this intersection horizontally to the right or left to the intersection with the rimpull or braking effort curve.
- 4 Read off the machine speed on the axis vertically underneath this point.

Under our policy of continuous product 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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