

# Euclid R32

**MAXIMUM GMW**  
55 600 KG (122,580 LBS)

**MAXIMUM PAYLOAD**  
32,6 TONNES  
(35.9 TONS)

**DIRECT-INJECTED,  
TURBOCHARGED VOLVO  
DIESEL WITH CHARGE AIR  
COOLING**

**AUTOMATIC SHIFT**

**HIGH LOAD CAPACITY -  
LOW TARE WEIGHT**

**LOW LOAD HEIGHT**

**ROCK BODY AS  
STANDARD  
-LOW MAINTENANCE  
REQUIREMENT**

**EFFECTIVE SUSPENSION  
AND SHOCK ABSORPTION  
-HYDROPNEUMATIC  
SUSPENSION UNITS  
ALL AROUND**



## EUCLID



## ENGINE

Volvo TD 122 KE, four-stroke direct-injected turbocharged diesel engine with charge air cooler and wet, replaceable cylinder lining.

**Cold starter:** Cold starter 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 122 KE			
Max. rating at	rps	rpm	35	2,100
SAE J1349	kW	bhp	295	401
Flywheel rating at	rps	rpm	35	2,100
DIN 70020	kW	bhp	276	375
Max. torque at	rps	rpm	20	1,200
SAE J1349	N•m	lb ft	1 600	1,180
DIN 70020	N•m	lb ft	1 560	1,150
No. of cylinders	6			
Displacement	l	in <sup>3</sup>	12	732
Bore	mm	in	130	5.1
Stroke	mm	in	150	5.9
Compression ratio	14,2:1			



## TRANSMISSION

**Torque converter:** Allison TC 498. Torque converter integral with transmission with lock-up on all gears (except reverse).

**Transmission:** Allison CLBT 754. Automatic planetary-type transmission with built-in retarder.

Make	Allison		
Model	TC 498		
Torque multiplication	2,35:1		
Speeds	Ratio	km/h	mph
1	5,18:1	11	6.8
2	3,19:1	18	11.2
3	2,02:1	28	17.4
4	1,38:1	41	25.5
5	1,00:1	57	35.4
R	4,72:1	12	7.5



## DRIVE AXLE

**Axle shafts:** Fully floating axle shafts with planetary-type hub reductions.

Ratios	
Differential	2,40:1
Planetary gear	4,94:1
Total reduction, rear axle	11,86:1



## TIRES

Standard - Front and Rear	Rim Width
Bridgestone 18.00 - 25 (32) E3	mm in 330 13



## LOAD CAPACITY

Load factor	1,42	
Load volume	m <sup>3</sup>	yd <sup>3</sup>
Struck	14,6	19.1
Heaped, 2:1	21	27.5
Payload	Tonne	Ton
Max.	32,6	35.9



## WEIGHTS

Tires	18.00-25/32 E-3	
	kg	lb
Max. GMW (Gross Machine Weight)	55 600	122,580
Net Weight	23 000	50,706
Max. Payload without liners	32 600	71,800
Max. Payload with liners	30 500	67,200
Liners	2 100	4,600
Weight Distribution	FRONT	REAR
Empty	50%	50%
Loaded	32%	68%





## BRAKE SYSTEM

**Service brake 1:** Retarder incorporated in transmission.

**Service brake 2:** Dual-circuit air-operated drum brakes.

**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	35	2,100
<b>Pressure Regulator</b>				
Actuate	MPa	psi	0,75	109
Relief	MPa	psi	0,81	117
<b>Brake Area</b>				
Front/Wheel (each)	cm <sup>2</sup>	in <sup>2</sup>	1 770	274
Rear/Wheel (each)	cm <sup>2</sup>	in <sup>2</sup>	1 770	274
No. of Reservoirs			3	
Total Volume	l	ft <sup>3</sup>	140	4.94

<b>Parking Brake</b>				
Area	cm <sup>2</sup>	in <sup>2</sup>	7 080	1,097

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

Braking Effect	kW	hp	265	360
At	rps	rpm	35	2,100



## 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	37	9.8
At Change	35	9.2
Transmission	40	10.5
At Change	30	7.9
Rear Axle, Total	60	15.9
Cooling System	70	18.5
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 pumps:** Two engine-driven, variable piston pumps mounted on the engine transmission's power take-off. Priority is always given to the steering system over the tipping system.

**Optional, 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. Two engine-driven piston pumps mounted on the engine transmission's power take-off. Common pumps and reservoir for steering and tipping. Steering is always given priority over the tipping system.

<b>Tipping</b>			
Raise Time with Load	s		12
Lower Time	s		12

<b>Hydraulic System</b>				
Relief Pressure	MPa	psi	19	2,755
Flow	l/min	US gal/min	189	49.9
At Engine Speed	rps	rpm	35	2,100



## 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 3-stage telescoping cylinder, one 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  
Rear-view mirrors  
Reverse alarm  
Rock ejectors  
Seat belt  
Sun visor  
Tinted glass  
Windshield washers  
Windshield wipers

### Transmission

Automatic lock-up  
Automatic power shift transmission  
Retarder  
Torque converter

## OPTIONAL EQUIPMENT

### Body equipment

Body liners  
Canopy reinforcement  
Top extension 190 mm (7.5 in)

### Cab equipment

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

### Electrical equipment

Working beams with protective grids

### Engine equipment

Engine heater

### External equipment

Heated rear-view mirrors  
Mud flaps, front wheels

### Other equipment

Rims with wooden protection  
Spare rim  
Spare wheel  
Tool kit

### Protective equipment

Cab guard  
Front wheel clear protection ring  
German (TGB) kit  
Muffler  
Sound insulation kit  
Supplementary steering

### Signs

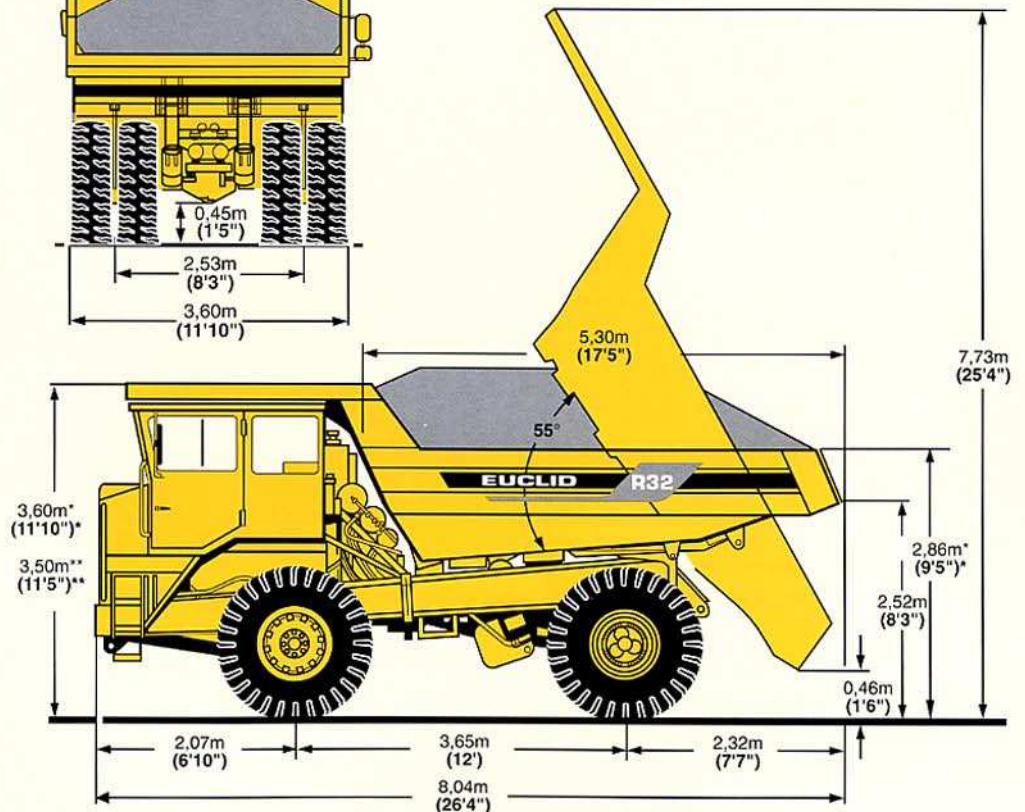
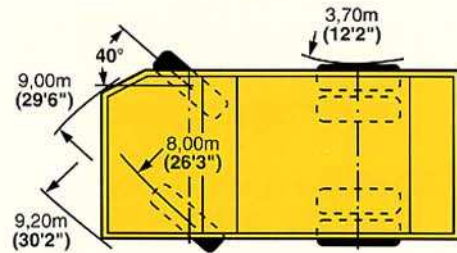
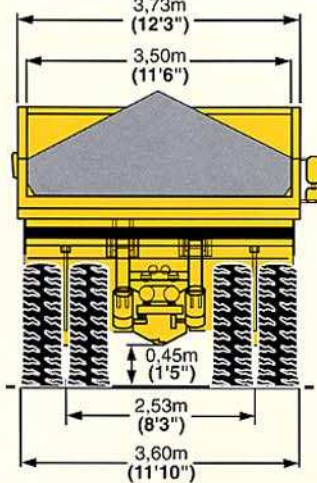
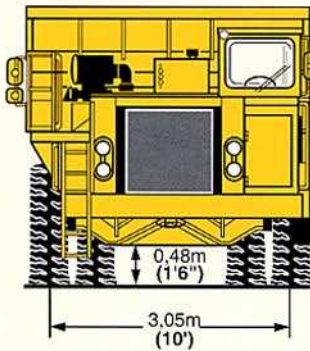
English  
French  
German  
Working beams with protective grids  
Pin plate manufactured, Poland  
Polish  
Spanish  
Swedish

### Transmission equipment

Transmission heater

### Wheel equipment

Tires 18.00-25 E-4 - Bridgestone  
Tires 18.00 R25 - Michelin  
XHDIA, XHDIB



\*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.

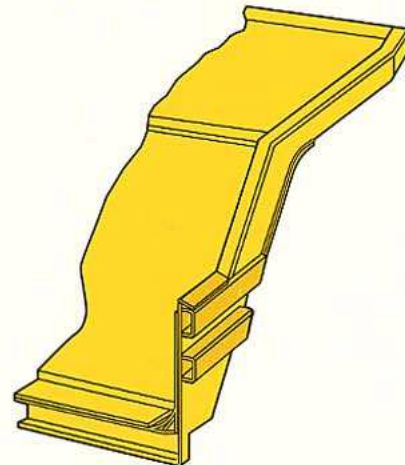
Voltage	V	24		
Battery capacity	Ah	160		
Alternator	W	1,680		
Starter motor	kW	hp	9	6.6



## 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. Continuously exhaust-heated body.



Body				
Tensile strength	N/mm2	psi	1 250	181,265
Hardness	HB		360-440	
Plate Thickness				
Front & Sides	mm	in	10	0.4
Floor	mm	in	20	0.8



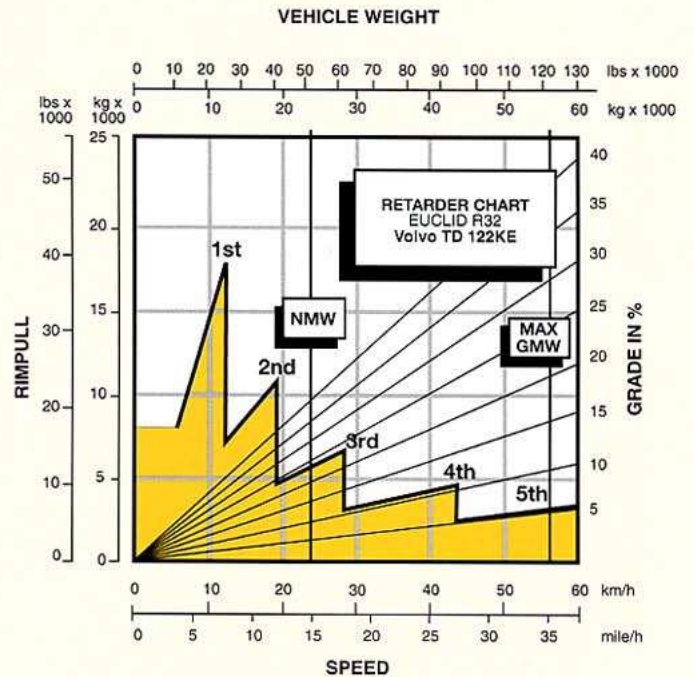
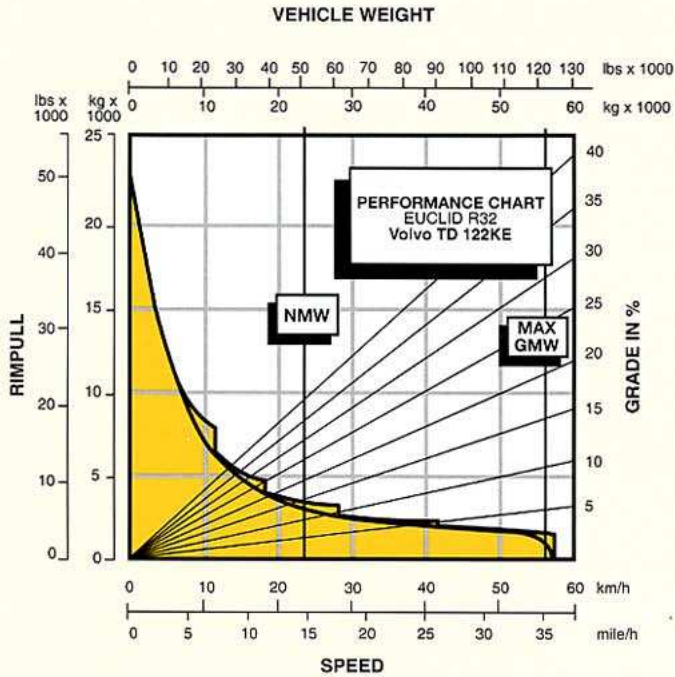
## CAB

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)	77
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.*

## **EUCLID-HITACHI Heavy Equipment, Inc.**

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