

**EUCLID**

**R 25**



**NOMINAL  
CAPACITY  
25 TONNES  
(27.6 TONS)**

**MAXIMUM GMW  
43 500 kg  
(96,000 lbs.)**

# EUCLID R25



## ENGINE

<b>Make</b>	<b>Detroit Diesel</b>
Model .....	6-71N
Type .....	2 Cycle
Aspiration .....	Natural
Rated Output (SAE) .....	170 kW @ 2100 rpm (230 bhp)
Flywheel Output (SAE) .....	160 kW @ 2100 rpm (214 bhp)
No. Cylinders .....	6
Bore & Stroke .....	108mm x 127mm (4 1/4" x 5")
Displacement .....	7.0 litres (426 in³)
Max. Torque .....	814 N•m @ 1600 rpm (600 lb-ft)
Starting .....	Electric



## TRANSMISSION

Allison CLBT-754. Planetary type, full power shift. Integral torque converter with automatic lock-up in all ranges and hydraulic retarder. Remote mounted 5 forward speeds, 1 reverse. Automatic shifting 2nd thru 5th ranges.

### Maximum Speeds @ 2100 RPM Governed Engine Speed

Range	Gear Ratio	Standard		Optional	
		2.78:1 Differential	2.31:1 Differential	2.78:1 Differential	2.31:1 Differential
1	5.18	8.5 ( 5.3)	10.3 ( 6.4)	8.5 ( 5.3)	10.3 ( 6.4)
2	3.19	13.8 ( 8.6)	16.7 (10.4)	13.8 ( 8.6)	16.7 (10.4)
3	2.02	22.0 (13.7)	26.5 (16.5)	22.0 (13.7)	26.5 (16.5)
4	1.38	32.2 (20.0)	38.8 (24.1)	32.2 (20.0)	38.8 (24.1)
5	1.00	44.4 (27.6)	53.4 (33.2)	44.4 (27.6)	53.4 (33.2)
R	4.72	9.5 ( 5.9)	11.3 ( 7.0)	9.5 ( 5.9)	11.3 ( 7.0)



## DRIVE AXLE

Full floating axle shafts, double reduction provided by Euclid Model 1900 differential and single reduction planetary with balanced life gears in each wheel.

<b>Ratios</b>	<b>Standard</b>	<b>Optional</b>
Differential .....	2.78:1	2.31:1
Planetary .....	4.59:1	4.59:1
Total Reduction .....	12.76:1	10.60:1

<b>Maximum Speeds</b>		
with 16.00-25 Tires .....	44.4 km/h (27.6 mph)	53.4 km/h (33.2 mph)



## TIRES

<b>Standard — Front and Rear</b>	<b>Rim Width</b>
Goodyear 16.00-25(28) E-3 .....	286mm (11.25")
Plus optional Goodyear tire types, treads and ply ratings.	



## LOAD CAPACITY

Struck (SAE) .....	11.2 (14.7)	m <sup>3</sup> (yd <sup>3</sup> )
Heap 3:1 .....	14.0 (18.3)	m <sup>3</sup> (yd <sup>3</sup> )
Heap 2:1 (SAE) .....	14.9 (19.5)	m <sup>3</sup> (yd <sup>3</sup> )
<b>Payload</b>	<b>Tonne (Ton)</b>	
From .....	22.7 (25.0)	
Maximum .....	25.9 (28.6)	



## WEIGHTS

	<b>kg</b>	<b>(lb)</b>
Chassis with Hoists .....	12 610	(27,800)
Body .....	4 990	(11,000)
Net Machine Weight .....	17 600	(38,800)
Front Axle .....	8 100	(17,850)
Rear Axle .....	9 500	(20,950)
Maximum GMW with Selected Tires		
16.00-25(28)E-3		
Max. Gross Machine Weight ...	43 500	(96,000)
Net Machine Weight .....	17 600	(38,800)
16.00 R25 RL-3		
Max. Gross Machine Weight ...	43 500	(96,000)
Net Machine Weight .....	17 980	(39,630)
Maximum Payload .....	25 900	(57,200)
Loaded Weight Distribution		
Front — 33%      Rear — 67%		
Machine weight based on 50% fuel		
Maximum gross machine weight not to exceed 43 500 kg (96,000 lbs.) including options, fuel and payload.		
<b>Options:</b>		
Body Liners, Complete:		
6mm (1/4") floor, 6mm (1/4") corners,		
5mm (3/16") sides, front, end protection,		
5mm (3/16") canopy,		
6mm (1/4") top rails .....	1 230	(2,720)
Body Top Extension: 3m (4yd) ...	450	(1,000)
<b>Tires: (set of 6)</b>		
16:00-25(28) E-4 .....	270	( 594)



## STEERING

Open-center, hydrostatic power steering using one, double-acting cylinder and independent gear pump. Supplementary steering provided by electric motor/pump in accordance with SAE J53 and ISO 5010.

Steering Angle .....	40°
Turning Diameter (SAE) .....	16.3m (53'-7")
Steering Pump Output (@ 2100 rpm) .....	.63 l/m (16.5 g/m)
System Relief Pressure .....	12 066 kPa (1750 psi)



## HOIST

One (1) Euclid three-stage, double-acting cylinder, inverted and inboard mounted with independent gear pump. Control valve mounted on reservoir.

Body Raise Time .....	17 sec.
Hoist Pump Output (@2100 rpm) .....	95 l/m (25 g/m)
System Relief Pressure .....	13 790 kPa (2000 psi)



## ELECTRICAL

Twenty-four volt lighting and accessories system, 50 amp alternator with integral transistorized voltage regulator. Two 12 volt heavy duty batteries connected in series.



## AIR

Compressor .....	5.7 l/s (12.0 cfm)
<b>Service Air</b>	
Pressure .....	860 kPa (125 psi)
Reservoir Capacity .....	57 litres (2.0 ft <sup>3</sup> )
<b>Warning:</b> Wig-wag alarm in cab activated when pressure drops to 620 kPa (90 psi).	

# EUCLID R25

## STANDARD EQUIPMENT

### General

Air horns, dual	Operator arm guard
Body down indicator, mechanical	Radiator grille guard
Body prop pins	Reverse alarm
Electric start	Rock ejector bars
Fan guard	Supplementary steering system, electric
Mirrors, right and left	Tow clevis, front
Mud flaps	

### Cab

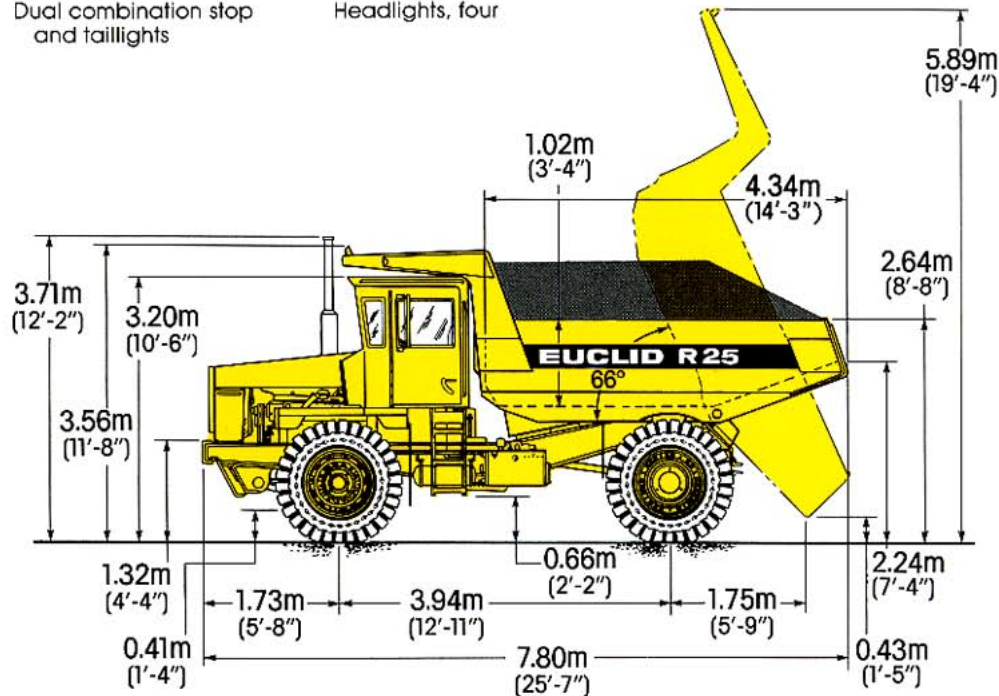
Ash tray	Operator seat, air ride
Automatic shift	Operator seat belt
Cab interior light	Passenger seat and belt
Cigar lighter	Rubber floor mat
Downshift inhibitor	Sun visor
Hand control valve for rear brakes	Tinted windshield
Heater and defroster	Windshield washers
	Windshield wipers

### Gauges and Indicators

Air cleaner restriction indicator light	Rear brake malfunction and park brake applied indicator light
Ammeter	Service air pressure gauge
Clutch pressure gauge	Speedometer
Converter oil temp. gauge	Steer system malfunction indicator light
Converter lock-up indicator light	Tachometer and hourmeter
Coolant temperature gauge	Transmission filter restriction indicator light
Engine oil pressure gauge	Gauge lights rheostat
Gauge lights rheostat	Wig-wag low air pressure alarm
High beam indicator light	
Hydraulic filter restriction indicator light	

### Machine Lights

Dual combination stop and taillights	Headlights, four
--------------------------------------	------------------



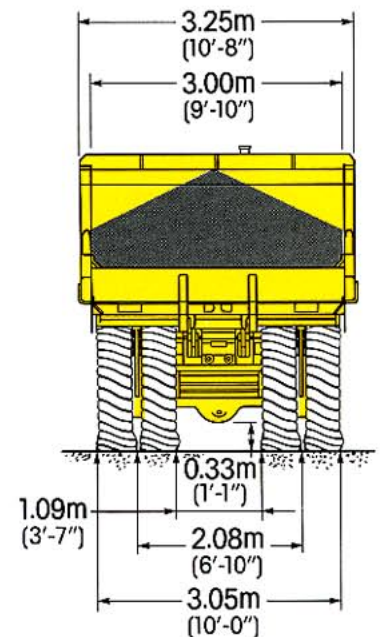
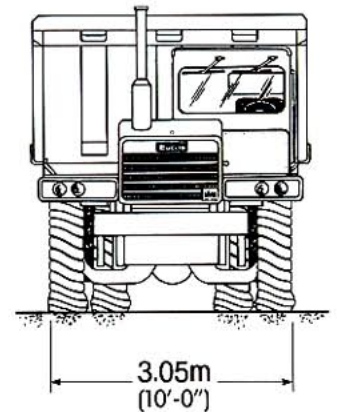
## OPTIONAL EQUIPMENT

Air conditioning	Cold starting aid
Alarm system, four-function (low oil pressure, high coolant temperature, low coolant level, high conv. temperature)	Differential, no spin
Alcohol vaporizer	Differential, 2.31 ratio
Back-up light	Engine/transmission guard
Body, exhaust heated	Hubodometer
Body liner plates	Lube system, automatic
Canopy spill guard extension	Sideboard extensions
	Tachograph, 24 hour recording

Standard and optional equipment may vary from country to country.

Special options provided on request. Consult VME Market Support.

Product improvement is a continuing VME project. Therefore, all specifications are subject to change without notice.



**Note:** Illustration may include optional equipment. **Note:** Dimensions shown are for empty vehicle with 16:00-25 tires.

# EUCLID R25



## FRAME

Rigid wide flange, fabricated "I" beams with four torque tube stiffeners, integral front bumper and front suspension cross member. Top flange of frame supports body resting on rubber pads along its full length, allowing reduced shock and uniform frame loading.



## SUSPENSION

### Front Suspension

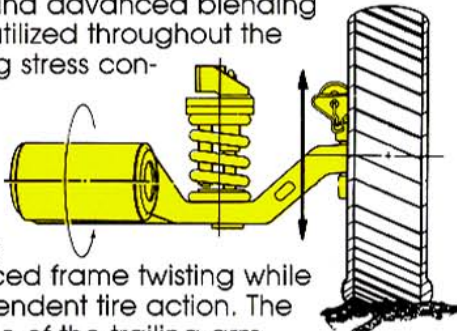
Independent trailing arm for each wheel. Constant rate coil spring, damped by single heavy duty shock absorber, provides suspension medium.

### Rear Suspension

Free floating, semi-elliptic leaf springs, thrust block mounted on variable load center spring pads.

The Euclid frame and suspension are designed to work in unison to provide maximum structural integrity and operator comfort. The rigid wide flange fabricated "I" beam frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight.

Large radii and advanced blending techniques are utilized throughout the frame, minimizing stress concentrations. The unique trailing arm front suspension absorbs haul road input, minimizing suspension-induced frame twisting while providing independent tire action. The wide track stance of the trailing arm design assures a more stable, comfortable ride.



## SERVICE CAPACITIES

	litres	(gallons)
Crankcase (incl. filters) . . . . .	18.9	( 5.0)
Transmission (incl. filters) . . . . .	24.6	( 6.5)
Cooling System . . . . .	66.2	(17.5)
Fuel Tank . . . . .	264.9	(70.0)
Hydraulic Tank . . . . .	68.1	(18.0)
Drive Axle . . . . .	28.8	( 7.6)



## BODY

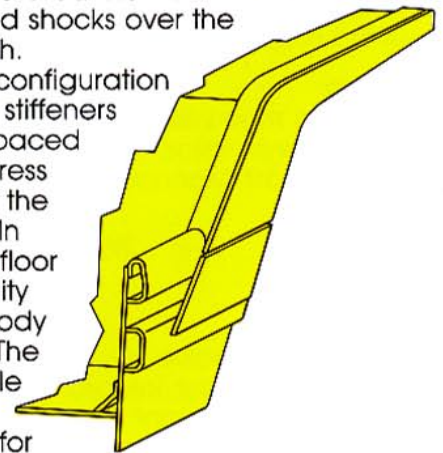
Flat floor, sloped tailchute. High yield strength 689 N/mm<sup>2</sup> (100,000 psi) alloy steel used in thickness of:

Floor . . . . .	13mm (1/2")
Front . . . . .	10mm (3/8")
Sides . . . . .	8mm (5/16")
Canopy . . . . .	5mm (3/16")

High yield strength 551 N/mm<sup>2</sup> (80,000 psi) alloy steel used for canopy side members, front plate, floor and side stiffeners. Body is rubber cushioned on frame.

The horizontal stiffener design of the Euclid body is specifically designed to minimize stress concentrations in any one area. Horizontal side rails dissipate load shocks over the entire body length.

The flat floor configuration enables the floor stiffeners to be uniformly spaced thus equalizing stress levels throughout the floor plate area. In addition, the flat floor increases durability and augments body liner installation. The sloped floor profile provides a low center of gravity for maximum stability.



Body lifting cut-outs on the underside of the top rails are provided to facilitate installation or removal of the body. The cut-outs are standardized to industry hook sizes. Additional features include a durable weld-on arm guard for operator safety.



## CAB

VME designed 142cm (56") wide all steel cab offset to the left and three point rubber mounted to isolate the operator from vibration. Safety glass throughout, tinted windshield with 5° slant. Fully insulated for noise and temperature control. Fresh air pressurized, ventilators seal out dust. Ladder and catwalk entry. The R25 is designed and originally manufactured to meet OSHA sound limitations at the operator's station with windows and vents closed under normal conditions.

# EUCLID R25



## DRUM BRAKES

### Service

Air actuated. Drum type, two shoe internal expanding, fixed anchor with "S" cam actuation. Provide stopping capability conforming to SAE J1473 and ISO 3450.

Front Size . . . . . 508mm x 152mm (20" x 6")  
Lining Area per wheel . . . . . 3458cm<sup>2</sup> (536 in<sup>2</sup>)  
Rear Size . . . . . 508mm x 191mm (20" x 7½")  
Lining Area per wheel . . . . . 4323cm<sup>2</sup> (670 in<sup>2</sup>)

### Secondary

Two independent circuits within the service brake system provide secondary stopping capability conforming to SAE J1473 and ISO 3450. System is manually or automatically applied to stop vehicle within prescribed braking distance.

### Parking

Drum, two shoe internal expanding type mounted behind transmission. Automatically applied if air pressure is lost. Manually controlled from instrument panel.

Size . . . . . 305mm x 127mm (12" x 5")  
Lining Area . . . . . 968cm<sup>2</sup> (150 in<sup>2</sup>)

### Retarder

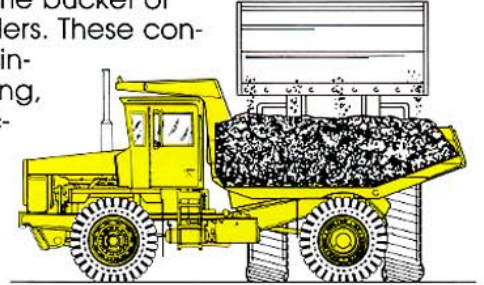
Foot operated valve controls oil flow into paddle-wheel type retarder, integral with transmission housing. Provides constant speed control on down-hill hauls. Retarder is automatically applied in the event air pressure is lost.

Maximum retarding output (includes engine friction)  
@ 2250 rpm . . . . . 410 kW (550 bhp)



## LOADER MATCHING

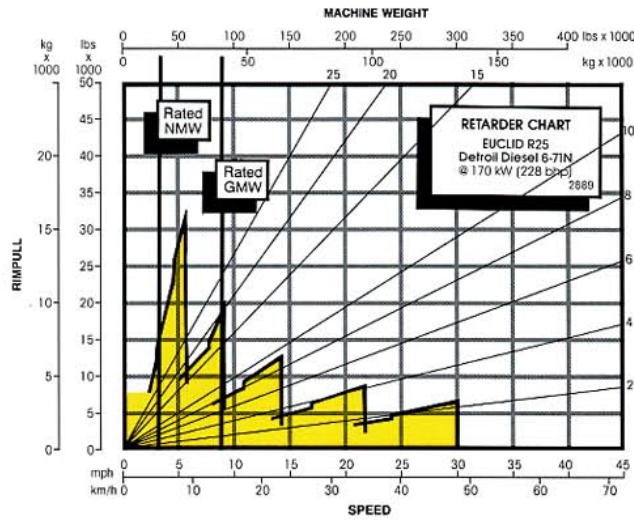
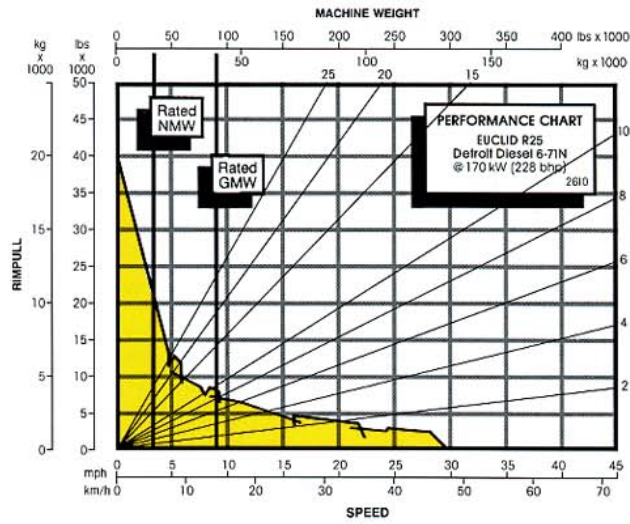
The long, low-profile body allows maximum compatibility with popular loader sizes. The "constant volume" horizontal floor configuration matches the constant volume bucket of front-end loaders. These concepts permit single spot loading, thereby reducing cycle times and increasing overall production.



## RELIABILITY

The R25 earns its name with proven reliability. The power train components and structural strength provide exceptional on-the-job availability, and the design and performance of this unit work to maximize productivity. The R25, engineered with VME's 50 years of experience, is designed to meet the challenges of worldwide construction, quarry and mining applications.

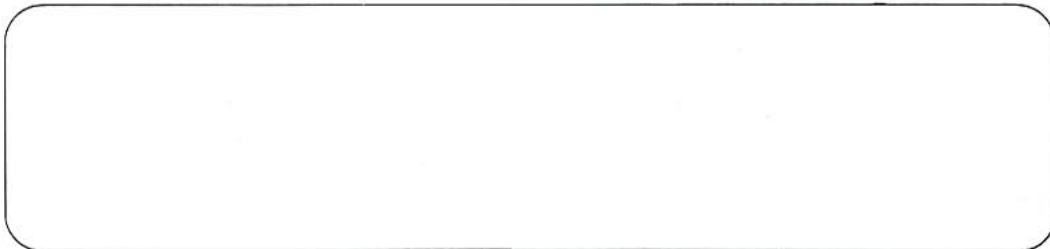




**INSTRUCTIONS:**

Diagonal lines represent total resistance (Grade % plus rolling resistance %). Charts based on 0% rolling resistance, standard tires and gearing unless otherwise stated.

1. Find the total resistance on diagonal lines on right-hand border of performance or retarder chart.
2. Follow the diagonal line downward and intersect the NMW or GMW weight line.
3. From intersection, read horizontally right or left to intersect the performance or retarder curve.
4. Read down for machine speed.



**VME Americas Inc.**

A subsidiary of VME Group N.V.

23001 Euclid Avenue  
P.O. Box 178017  
Cleveland, Ohio 44117-8017



EUC and EUCLID are registered mark.  
VME Americas Inc.

FORM NO. RH-236  
Date 7/88  
Printed in U.S.A.