



# Euclid R150



**MAXIMUM GMW**  
234 467 KG  
(517,000 LBS)

**PAYLOAD RANGE**  
120.6 TO 136 TONNES  
(133.0 TO 150 TONS)

**ELECTRIC DRIVE**  
GE 791 WHEEL MOTOR

**EXTENDED RANGE**  
ELECTRIC DYNAMIC  
RETARDING

**ALL-HYDRAULIC**  
BRAKING

**TWO MAN CAB**

**NEOCON SUSPENSION**

**SEPARATE HYDRAULIC**  
RESERVOIRS  
FOR STEERING  
AND HOIST

## EUCLID





## ENGINES

Make	Detroit Diesel	Cummins
Model	12V-149TIB	KTTA38-C
Type	2 Cycle	4 Cycle
Aspiration	Turbocharged/Intercooled	Turbocharged
Rated Output (SAE)	1350 bhp 1007 kW @ 1900 rpm	1350 bhp 1007 kW @ 2100 rpm
Flywheel Output (SAE)	1200 bhp 895 kW @ 1900 rpm	1200 bhp 895 kW @ 2100 rpm
No. Cylinders	12	12
Bore & Stroke	146 mm x 146 mm 5 3/4" x 5 3/4"	159 mm x 159 mm 6 1/4" x 6 1/4"
Displacement	29,3 liters 1788 in <sup>3</sup>	37,7 liters 2300 in <sup>3</sup>
Max. Torque	3909 lb-ft 5300 N·m @ 1400 rpm	3882 lb-ft 5264 N·m @ 1500 rpm
Optional Engines	1600 hp	1600 hp

### High Horsepower Options -

Make	Detroit Diesel	Cummins
Model	16V-149TIB	KTA50-C
Type	2 Cycle	4 Cycle
Aspiration	Turbocharged	Turbocharged
Rated Output (SAE)	1600 bhp 1193 kW @ 1900 rpm	1600 bhp 1193 kW @ 1900 rpm
Flywheel Output (SAE)	1492 bhp 1113 kW @ 1900 rpm	1519 bhp 1133 kW @ 1900 rpm
No. Cylinders	16	16
Bore & Stroke	146 mm x 146 mm 5 3/4" x 5 3/4"	159 mm x 159 mm 6 1/4" x 6 1/4"
Displacement	39,1 liters 2384 in <sup>3</sup>	50,3 liters 3067 in <sup>3</sup>
Max. Torque	4804 lb-ft 6514 N·m @ 1600 rpm	4400 lb-ft 5966 N·m @ 1500 rpm
Starting	Air	Air



## ELECTRIC DRIVE

### Controls

General Electric Statex SSL System.

### Alternator

General Electric Model GTA 25. Direct mounted to engine. (High horsepower options require GTA 22 alternator).

### Wheel Motors - Standard

General Electric Model 791 complete with planetary assembly in each rear wheel.

Ratio	28.85:1		
Max. Speed	km/h	mph	55,4 34.4

### Module Package

Radiator with fan, engine, alternator and blower mounted on sub frame within main frame.



## TIRES

Standard - Front and Rear			Rim Width	
Goodyear 33.00-51 (58PR) E-4	mm	in	610	24.0"
Optional - Front and Rear				
Goodyear 33.00R51 ★★RL-4H	mm	in	610	24.0"

Plus optional Goodyear tire types, treads and ply ratings.



## LOAD CAPACITY

	m <sup>3</sup>	yd <sup>3</sup>
Struck (SAE)	59,3	77.5
Heap 3:1	76,5	100
Heap 2:1 (SAE)	84,1	110

Based on material density. VME will size an optional body. Consult VME Market Support.



## ELECTRICAL SYSTEM

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



## HYDRAULIC SYSTEM

Two (2) Euclid three-stage, double-acting cylinders, inverted and outboard mounted. Separate reservoir and independent gear pump. Direct operating control valve mounted on reservoir.

Body Raise Time	s	25		
Body Float Down Time	s	20		
Hoist Pump Output (@ 1900 rpm)	l/m	<b>gpm</b>	507	134
System Relief Pressure	kPa	<b>psi</b>	17 238	2,500



## WEIGHTS

	kg	lb
Chassis with Hoist	80 327	177,120
Body	18 140	40,000
Net Machine Weight	98 467	217,120
Front Axle	48 249	106,388
Rear Axle	50 219	110,732
Payload	136 000	299,900

### Standard - Front and Rear

Goodyear 33.00-51 (58)		
Maximum Gross Machine Weight	234 467	517,020

### Loaded Weight Distribution

Front - 33% Rear - 67%

Machine weight based on 50% fuel

\*Maximum gross machine weight plus

fuel and payload not to exceed

(including options)

	282 138	622,000
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### Options:

	kg	lb
Body Liners, Complete:	8 027	17,700
19 mm 3/4" floor, 16 mm 5/8" corners,		
10 mm 3/8" sides, front and top rails,		
6 mm 1/4" canopy	9 934	21,900

\*Max. GMW subject to G.E. approval for given application.



## STEERING SYSTEM

Closed center full time hydrostatic power steering system using two double-acting cylinders, piston type pump and combined brake/steering system reservoir. Accumulator provides supplementary steering in accordance with SAE J53 and ISO 5010.

Steering Angle				41°
Turning Diameter (SAE)	m	ft in	25,6	84'0"
Steering Pump Output	l/m	<b>gpm</b>	125	33
Operating System Pressure	kPa	<b>psi</b>	17 238	2,500





## AIR

### Compressor

Detroit Diesel	l/s	<b>cfm</b>	5,7	<b>12.0</b>
Cummins	l/s	<b>cfm</b>	14,2	<b>30.0</b>

### Service Air

Pressure	kPa	<b>psi</b>	860	<b>125</b>
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### Start System

Pressure	kPa	<b>psi</b>	860	<b>125</b>
Reservoir Capacity	liters	<b>ft<sup>3</sup></b>	566	<b>20</b>



## SERVICE CAPACITIES

	liters	gallons
Crankcase (incl. filters)		
Cummins KTTA 38-C	151,4	<b>40.0</b>
Detroit Diesel 12V-149TIB	136,3	<b>36.0</b>
Cooling System	359,6	<b>95.0</b>
Fuel Tank	1930,4	<b>510.0</b>
Hydraulics		
Hoist Tank	500,4	<b>132.2</b>
Steering Tank	150,3	<b>39.7</b>
GE 791 wheel motors	37,8	<b>10.0</b>



## BODY

Flat floor, sloped tailchute, continuously exhaust heated. High yield strength, 690 N/mm<sup>2</sup> **100,000 psi** alloy steel used in thickness of:

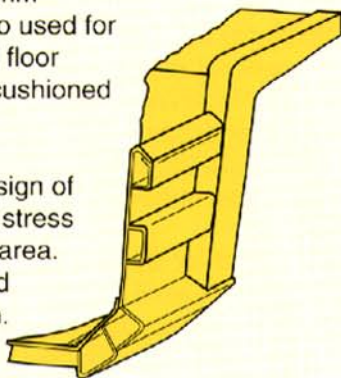
	mm	in		
Floor			19	<b>3/4"</b>
Front			10	<b>3/8"</b>
Sides			10	<b>3/8"</b>
Canopy			6	<b>1/4"</b>

High yield strength 689 N/mm<sup>2</sup> **100,000 psi** alloy steel also used for canopy side members and floor stiffeners. Body is rubber cushioned on frame.

The horizontal stiffener design of the Euclid body minimizes stress concentrations in any one area.

Load shocks are dissipated over the entire body length.

The closely spaced stiffeners provide additional protection by minimizing distances between unsupported areas.



## FRAME

Box section main frame rails bridged by three crossmembers, front bumper and front suspension tube. Rails are constant taper, constructed of 689 N/mm<sup>2</sup> **100,000 psi** yield strength steel. Two rear crossmembers have integral suspension and drive axle mountings. Crossmember to frame rail junctions use large radii to minimize stress concentrations.



## ALL-HYDRAULIC BRAKING

### Service

All-hydraulic actuated. Two calipers per front disc, one caliper per rear disc. Calipers are internally ported, each containing three pairs of opposing pistons.

### Front Axle

BFGoodrich Model J6 wheel speed brakes

Disc Diameter ea. (2 discs/axle)	cm	<b>in</b>	106,7	<b>42</b>
Lining Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	6 194	<b>960</b>
Brake Pressure (Max.)	kPa	<b>psi</b>	17 238	<b>2500</b>

### Rear Axle - Standard GE 791 wheel motors

BFGoodrich series "F" armature speed brakes

Disc Diameter ea. (2 discs/axle)	cm	<b>in</b>	51,1	<b>20.1</b>
Lining Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	2 426	<b>376</b>
Brake Pressure (Max.)	kPa	<b>psi</b>	8 964	<b>1300</b>

### Secondary

Three independent hydraulic circuits within the service brake system provide secondary stopping capability. System is manually or automatically applied to stop vehicle within prescribed braking distance.

### Parking

Spring-on, hydraulic-off brake heads provide parking capabilities. Brake systems comply with SAE 1473 and ISO 3450.

### Retarder

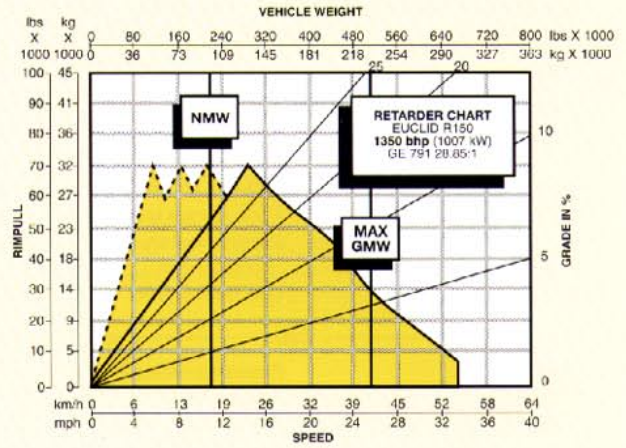
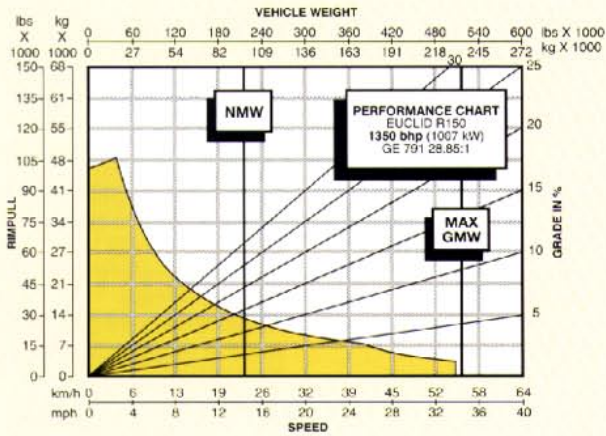
Retardation on down grades achieved through D.C. wheel motors in conjunction with General Electric resistor grid package located on cab deck. Cooling for this grid package is achieved with forced air flow provided by dual blowers driven by a single electric motor. 3-step extended range retardation package is standard.

Maximum Dynamic retarding with continuous rated blown grids				
	kW	<b>bhp</b>	2013	<b>2700</b>

The Euclid R150 is equipped with an all hydraulic actuated braking system providing increased braking force and quick system response. A primary accumulator stores oil under sufficient pressure so that 100% braking pressure is always available.

The main valves in the all-hydraulic brake system conveniently located at shoulder height on the forward left hand frame rail. The placement of this valve package enhances serviceability as all pressure checks and system troubleshooting can be made at this central location. The system is proportioned front to rear for improved control.





## 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.

**NOTE:** Photos and illustrations throughout may show optional equipment.

*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.*

## VME Industries North America

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FORM NO. RH-644  
DATE 10/92  
Printed in U.S.A.



## STANDARD EQUIPMENT

### General

Air cleaner guards	Mirrors, right and left
Air horn, dual	Moisture ejector, automatic
Body down indicator, mechanical	Mud flaps
Body prop cable	Operator arm guard
Extended range dynamic retarding (3 steps)	Radiator grille guard
Fan guard	Retard speed control
Fully hydraulic brake system	Reverse alarm
Ground level air start charge line	Rock ejector bars
Guard rails around platform	Supplementary steering system, accumulator
Hoist kickout	Tow hooks, front

### Cab

Ash tray	Passenger seat and belt
Cab interior light	Rubber floor mat
Cigar lighter	Sun visor
Heater and defroster	Tilt steering wheel
Load and hold switch	Tinted glass, all windows
Load counter	Windshield washer
Operator seat, air ride	Windshield wiper, two speed
Operator seat belt	

### Gauges and Indicators

Air cleaner restriction gauge	indicator light
Air start pressure gauge	Rear brake malfunction indicator light
Blower loss indicator light	indicator light
Coolant temperature gauge	Speedometer
Engine oil pressure gauge	Steering filter restriction indicator light
Gauge lights	Steering pressure gauge
Ground fault indicator light	Steer system malfunction indicator light
High beam indicator light	Tachometer
Hourmeter	Voltmeter
Hydraulic filter restriction indicator light	
Parking/Load and hold brake	

### Machine Lights

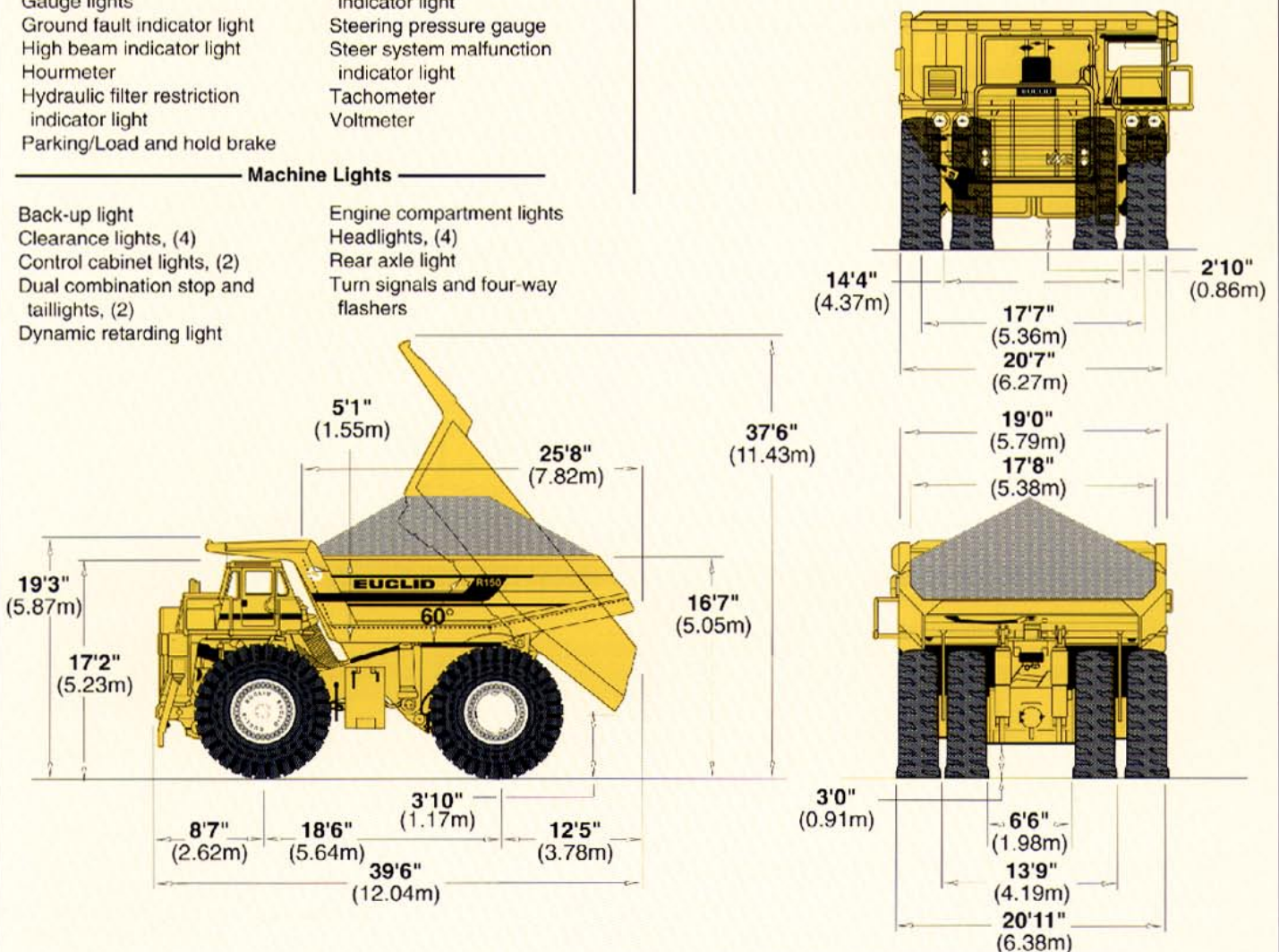
Back-up light	Engine compartment lights
Clearance lights, (4)	Headlights, (4)
Control cabinet lights, (2)	Rear axle light
Dual combination stop and taillights, (2)	Turn signals and four-way flashers
Dynamic retarding light	

## OPTIONAL EQUIPMENT

Air conditioning	Foreign language decals and plates
Air dryer	Fuel gauge
Alternate air starter	Halogen headlights
Automatic lubrication system	Hubodometer
Battery isolation switch	Manually actuated central lube
Body liner plates, std. and heavy duty	Metric speedometer
Buddy dump	Multi-function engine and hydraulic system alarms
Buddy steer	On board load box
Centralized service panel fluids	Propulsion interlock body up
Cold starting aid	Radiator shutters
Engine access ladders	Retard speed control
Engine coolant and oil heater (220 VAC)	Reverse pedal configuration
Extended range dynamic retarding (7 steps)	Start interlock
Fast fueling system (Wiggins) on tank	Tachograph
Field repairable core radiator	Top extensions
Fire protection systems (manually actuated with engine shutdown)	

Standard and optional equipment may vary from country to country. Special options provided on request. Consult VME Market Support.

**Note:** Dimensions shown are for empty vehicle with 33.00-51 tires.







## SUSPENSION

### Front Suspension

Independent trailing arm for each front wheel. Neocon struts containing energy-absorbing gas and compressible neocon-x fluid are mounted between trailing arm and frame. Variable damping and rebound feature included.

### Rear Suspension

"A" frame structure, integral with axle housing, links drive axle to frame at forward center point with pin and spherical bushing. Track rod provides lateral stability between frame and drive axle. Rear mounted neocon struts containing energy-absorbing gas and compressible neocon-x fluid suspend drive axle from frame.

Maximum wheel oscillation

8°

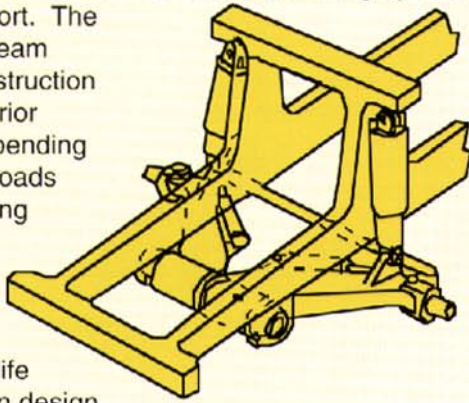
The Euclid frame and suspension are designed to work in unison to provide maximum structural integrity and operator comfort.

The tapered box beam frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight.

Euclid achieves long frame fatigue life through proven design

and manufacturing practices. Smooth transitions minimize stress concentrations and steel castings effectively distribute input loads. Frame life is further enhanced by utilizing fatigue resistant weld joints and locating welds in low stress areas. The unique trailing arm front suspension absorbs haul road input, minimizing suspension-induced frame twisting while providing independent tire action. Suspension struts are mounted with spherical bushings, eliminating extreme sidewall forces by insuring a purely axial input to the strut. The wide track stance of the trailing arm design and long wheelbase assure a more stable, comfortable ride.

The suspension struts employ gas and neocon-x fluid as the energy-absorbing media. This suspension continues to absorb energy when extreme dynamic loads are generated which significantly contributes to improved isolation of the operator and machine components.



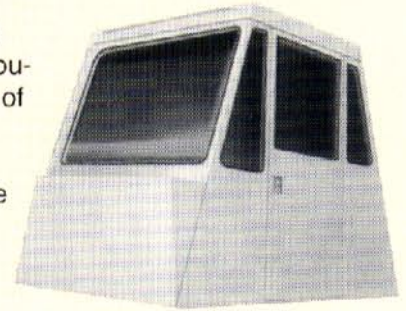
## COMMAND CAB II

### Structurally Sound

Command Cab II, doublewall construction of 11 gauge inner and outer steel panels, lends itself to a more structurally sound cab. Foam rubber lining material along with foam rubber-backed

carpeting and multiple-

layered floor mat act to absorb sound and control interior temperature. A three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator's compartment.



### Ease of Operation and Systems Monitoring

A wrap-around style dashboard positions the controls within easy reach and visual contact. A full compliment of easy-to-read, color banded gauges with international symbols and centrally positioned tachometer, speedometer and bank of warning lights provide the operator information required to safely pilot the machine.

### Excellent Serviceability

A removable front closure allows easy access to electrical components, brake master cylinder, retarder valve and washer bottle. All electrical junction points are located in the front compartment. The filter is located to the side of the cab and servicing requires the removal of only two bolts. The upper dash utilizes four (4) removable panels to house gauges and customer options. Each panel is individually removed from inside the cab and only those requiring service need to be removed.

### Designed for Operator Comfort

Command Cab II standard equipment includes the Isringhausen six-way adjustable air seat, tilt steering wheel, filtered ventilation, insulated interior under the cab heading, and a fully upholstered trainer's seat that folds down to reveal a tray for lunch boxes and other gear.