



MAKHUDUTHAMAGA

LOCAL MUNICIPALITY

Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

PHYSICAL ADDRESS

01 Groblersdal Road
Jane Furse
1085

POSTAL ADDRESS

Private Bag X434
Jane Furse
1085

(Below chassis top)			
Hopper opening at rear	2083 x 1448mm		
Body Capacity	12.0 m ³		
Hopper Capacity	1.25 m ³		
Body Mass	4320 kg		
(Fully Equipped)			
Hydraulics.			
Pump, Gear Type	76 l / min.		
(At nominal 1300 rpm engine)			
System pressure	14 Mpa		
(Depending on fitted extras)			
Oil Reservoir	122 Liters		
Cycle Time	20 secs.		
Standard Fitment.			
Crew cab, semi enclosed.			
Auto control of engine speed for compaction cycle.			
Cycle control, semi automatic located at the rear of the unit, lever operated with the capability to start, stop and reverse the direction of any function at any time throughout the cycle			
Rear steps for operators in pierced, non slip tread			
One rotating beacon			

2|

TEL
013 265 8600

EMAIL / WEBSITE
info@makhuduthamaga.gov.za
CUSTOMER CARE: 013 265 8616

FAX
013 265 1975

M.A. ME



Buzzer for crew to driver communications.

Full lighting to road ordinance

Other Equipment

Tailgate mounted bin lifting equipment for 240 to 1100 litre wheeled bins

Roof mounted Hydraulic Reeving system to lift bins of 4.5 to 6.0 m³

Fully enclosed crew cab

Extra rotating Beacons

Working lights

Hand-brake failsafe for PTO protection

Rev. limiter.

Emergency stop to PTO drive

Roof mounted extra rear lights

Quick demountable frame for high level bin lifters

Hinged access door in side of body complete with safety interlocks

High pressure filters on hydraulics Chassis Requirements

The M160 is suitable for mounting to chassis with a minimum GVM rating of 14.5 tons.

The drive train must be fitted with a PTO with a minimum power of 35kw, and a ratio to engine speed of 1 to 1.

On chassis fitted with electronic engine management, control of PTO protection and revs is incorporated into the PSM system. When automatic gearboxes are installed, neutral select protects PTO engagement on the move.

Body specifications

- Nominal compaction rating kg/m³
- Flat floor – 3.0mm, 350 Mpa minimum yield strength
- Apron plate in mm, 700 Mpa yield ,abrasion resistant plates

3|



Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

- Integrated top and bottom rive to maintain integrity of body under load
- 700 Mpa yield steel used in structural applications. All seams are fully welded

Tailgate Specifications

- Hopper floor – 6 mm high yield strength , abrasion resistant steel
- Hopper sides -3 mm with replaceable wear plates in hopper sides from 3 mm high abrasion resistant plate
- Hopper sill- 70 Mpa yield strength, with internal reinforcing
- Inside tailgate loading width 2083 mm
- Loading sill height below rail- 120 mm
- Grab handle each side of tailgate
- Rear steps – each side ,slip resistant and self cleaning material
- One piece replaceable rubber gasket for water tight seal between apron and tailgate

Compaction mechanism specifications

- Packing blade (upper) 400 Mpa & 550 Mpa yield steel
- Sweeper blade 550 Mpa yield strength with abrasion resistant tip liner
- Primary compaction by panel accomplished by two(2) double acting hydraulic cylinders located at the tailgate upper side
- Packing mechanism located into integral guide channels via heavy duty guide blocks with removable wear plates
- Pacing mechanism cylinders have replaceable bushings for extended service life
- Packing mechanism allows the ejector panel to automatically advance via an ejector drift relief valve in the system

Ejector panel specifications

- Ejector panel – corrosion resistant steel
- Discharge of load means of double action ,3 stage telescopic cylinder to extend and retract the ejector panel the full length of the body
- Slide shoes located in tracks mounted along the lower body sides. Replaceable wear plates are fitted to shoes and track

Control and hydraulic systems

4|



Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

- Ejector panel & tailgate raise controls are mounted outside on the front left hand side of the body
- The hydraulic system operating pressure is 14 Mpa but may be increase dependant on auxiliaries fitted
- The hydraulic pump is a heavy duty gear pump rated at 76 LPM at 1 200 RPM
- All hydraulic hoses conform to SAE/DIN standards and double wire braid hose or steel hydraulic pipe
- The hydraulic tank has a capacity of 122 litre
- The hydraulic system have a tank mounted strainer and a 10 micron in line return filter
- Compaction controls are located on the left side of tailgate
- The system is semi automatic with hydraulic kick – out for sequence control

Electrical and Light Systems

- All electrical wiring connectors are automotive double seal with wiring in split convoluted loom
- All wiring connections soldered with rubber moulded covering or crimp type connector with shrink wrap
- All limit switches are heavy duty type
- Clearance ,back up and directional lights are to SABS standards and provided with light protectors

Chassis requirements

The specifications below serve as a guideline only. A detail mass distribution will be provided taking specific chassis and body configuration into consideration.

- Minimum front axle rating of 5 500 kg is recommended
- Minimum rear axle rating of 10 200 kg is required for maximum legal loading
- Gross vehicle mass – 14 500 kg recommended minimum

Wheel base 4,4 m to 5.6 m

TRUCK SPECIFICATION

Mass

+/-



MAKHUDUTHAMAGA

LOCAL MUNICIPALITY

Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

PHYSICAL ADDRESS

01 Groblersdal Road
Jane Furse
1085

POSTAL ADDRESS

Private Bag X434
Jane Furse
1085

Tare mass chassis / cab	4 690 kg
Tare mass on front axle	2 740 kg
Tare mass on rear axle/bogie	1 950 kg
Legal body and payload allowance	10 310 kg
Manufacturer's gross front axle massload (GA)	6 000 kg
Manufacturer's gross rear axle / unit massload (GA/GAU)	9 200 kg
Manufacturer's gross vehicle mass (GVM)	15 000 kg
Manufacturer's gross combination mass (GCM)	15 000 kg
Max permissible front axle massload (A)	6 000 kg
Max permissible rear axle / unit massload (A/AU)	9 000 kg 15 000 kg
Max permissible vehicle mass (V)	15 000kg
Max permissible drawing vehicle mass (D/T)	
Engine	
Type	FE 6TC
Configuration and number of cylinders	Direct injection, turbocharged intercooled in-line 6 cylinder diesel
Displacement	6 925 cm3
Maximum power output	175 kW @ 2 800 r/min
Maximum torque	660 Nm @ 1 800 r/min
Governor type	RED electronic (all speed)
Brakes	
Service brakes	Dual circuit air assisted hydraulic drum brakes all

6|

TEL
013 265 8600

M.S
EMAIL / WEBSITE
info@makhuduthamaga.gov.za
CUSTOMER CARE: 013 265 8616

M.A M.E
FAX
013 265 1975



MAKHUDUTHAMAGA

LOCAL MUNICIPALITY

Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

PHYSICAL ADDRESS

01 Groblersdal Road
Jane Furse
1085

POSTAL ADDRESS

Private Bag X434
Jane Furse
1085

71	<p>Emergency/Parking brake Engine brake</p> <p>Total brake lining area</p> <p>ABS</p> <p>Wheels & tyres</p> <p>Rims</p> <p>Tyres</p> <p>Spare wheel</p> <p>Front Axle</p> <p>Type</p> <p>Suspension:</p> <p>Rear Axle</p> <p>Type</p> <p>Suspension</p> <p>Chassis</p> <p>Type</p> <p>Frame section</p>	<p>round</p> <p>Spring brakes on rear axle</p> <p>Remote mounted exhaust brake with lever switch on steering column</p> <p>4 544 cm²</p> <p>Standard</p> <p>7.5x22.5 – 162</p> <p>11R22.5 Regional all round</p> <p>Slung from a winch-type carrier under rear of chassis</p> <p>: FA50 drop forged "I" beam with reverse "Elliot" steering knuckles</p> <p>Semi-elliptic steel leaf springs with dual acting telescopic shock absorbers</p> <p>RS90 single reduction hypoid differential</p> <p>Semi-elliptic steel leaf springs with dual acting telescopic shock absorbers</p> <p>Reinforced parallel ladder frame with riveted cross members</p>	
----	---	---	--



		250 mm x 80 mm x 8 mm plus 3,2 mm reinforcement	
	Steering		
	Type	Recirculating ball and screw integral power steering	
	Ratio	22,42 : 1	
	Number of turns lock to lock	5.5	
	Dimensions		
	Wheelbase (WB)	5 650 mm	
	Overall length (OL)	9 530 mm	
	Overall width (OW)	2 375 mm	
		2 715 mm	
	Overall height (OH)	front 970 mm	
	Frame height unladen -	rear 1 080 mm	
	Frame height unladen -	265 mm	
	Ground clearance Track front (FT)	1 935 mm	
	Track rear	1 800 mm	
		1 280 mm	
	Overhang front (FO)		
	Overhang rear (ROF) (to end of frame)	2 600 mm	
		845 mm	
	Centre of front axle to rear of cab	4 805 mm	
	Centre of rear axle to rear of cab (CA)	860 mm	
	Chassis width	45 degrees	
	Cab tilt angle	19.2 m	
	Turning circle	200 litres	
	Fuel tank capacity		
	Electrical equipment		
	Alternator	Bosch 28 V, 50 A	
	Starter	motor 24 V, 4 kW	
	Batteries	2 x 12 V, 65 Ah, Code 656	
	Clean air system		
8	Air cleaner type	Donaldson cyclonic with dry paper safety and primary	



MAKHUDUTHAMAGA

LOCAL MUNICIPALITY

Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

PHYSICAL ADDRESS

01 Groblersdal Road
Jane Furse
1085

POSTAL ADDRESS

Private Bag X434
Jane Furse
1085

91	<p>Air cleaner</p> <p>Cab</p> <p>"Wide" steel/composite forward control suspension tilt cab</p> <ul style="list-style-type: none"> • Three windscreen wipers, two speeds plus intermittent setting • Four external rearview mirrors mounted on cab doors • Fully adjustable, mechanical suspension driver's seat • Fixed assistant's and centre seat • Heater/demister with 4-speed blower • Steering column adjustable for height and rake • Cigarette lighter • Column mounted controls for lights, indicators, windscreen wipers/washers, exhaust brake and horn • Safety belts: 3 point driver & passenger, lap belt for centre seat <p>Instruments</p> <p>Speedometer/odometer/tripmeter, rev. counter, fuel gauge, engine temperature gauge, air pressure gauge. Audio and visual warning devices</p> <p>Miscellaneous equipment</p> <p>Toolkit, jack, warning triangle, owner's handbook/service booklet, electric windows, fog lamps. Air conditioner</p> <p>Performance data</p>	<p>elements, restriction indicator</p> <p>330 mm in diameter</p> <p><i>MS</i> <i>U-A</i> <i>M.E</i></p>	
----	--	---	--



MAKHUDUTHAMAGA

LOCAL MUNICIPALITY

Mmogo re šomela diphetogo!

DEPARTMENT:
BUDGET AND TREASURY

PHYSICAL ADDRESS
01 Groblersdal Road
Jane Furse
1085

POSTAL ADDRESS
Private Bag X434
Jane Furse
1085

Final drive ratio		6.166:1					
Gear	Gear ratio	Road speed @Max R/Min(KM/H)	Road speed@ Max Torque (KM/H)	Gradeability V%	Gradeability @ D/T%		
1	3.510	15	9	32.66	32.66		
2	1.900	28	17	17.68	17.68		
3	1.440	65	39	7.74	7.74		
4	1.000	94	56	5.38	5.38		
5	0.740	127	76	3.98	3.98		
6	0.640	146	88	3.44	3.44		
Reverse	5.090	18	11	27.37	27.37		
Licensing &Registration: License Disk &Installation of Number Plates							
TOTAL						R	R

Bidders are advised to use this addendum for pricing and ignore the one in the tender document. The closing date for this project is extended to 22 March 2017@12h00.

.....
Secretary

.....
Chairperson

.....
User Department

.....
Municipal Manager

(Approved/Disapproved)

07/03/2017

Date
07/03/2017

Date
2017/03/07

Date
07/03/2017

Date