

Title: **Provision, to PURCHASE NEW
MOTOR GRADER – Scope Of
Work**

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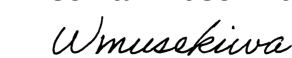
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Date:

Date: 22 August 2022

1. PURPOSE

The purpose of this document is to define the services needed from a contractor for provision, to supply New Motor Grader for Eskom Rotek Industries (ERI) – Bulk Material Services (BMS) Engineering Plant.

2. BRIEF OVERVIEW OF OUR BUSINESS

ERI BMS division provide amongst other services mobile (yellow) plant equipment for bulk materials handling (ash and coal) to ERI BMS division in various power stations across the country mainly fossil power station. The fossil power stations are concentrated in Mpumalanga, Limpopo and Gauteng. The mobile plant equipment is used to build and maintain coal stockyard, ash dams and dumps. In order to provide high standard of service a well maintained and reliable mobile plant is essential.

3. SCOPE OF WORK FOR PURCHASING NEW MOTOR GRADER

Technical Specifications for the purchasing of New Motor Graders for BMS Plant Department. It is also important that the supplier stays with the required specifications listed below.

3.1 Technical Requirements/Scope**3.1.1 Engine**

Model - 3176C DITA air-to-air after-cooled (ATAAC) variable horsepower (VHS)

Net power, gears 1 and 2 - 165 horsepower; 123 kilowatts

Net power, gears 3 through to 6 - 185 horsepower; 138 kilowatts

Number of cylinders – 6

Displacement - 10.3 litres (629 cubic inches)

3.1.2 Operational specifications

Standard operational weight, front axle - 4138 kilograms (9123 pounds)

Standard operational weight, rear axle - 10539 kilograms (23234 pounds)

Standard operational weight, total - 14677 kilograms (32357 pounds)

Maximum operational weight, front axle - 7590 kilograms (16733 pounds)

Maximum operational weight, rear axle - 13761 kilograms (30139 pounds)

Maximum operational weight, total - 21261 kilograms (46872 pounds)

Fuel capacity - 397 litres (105 gallons)

Hydraulic system fluid capacity - 68 litres (18 gallons)

Cooling system fluid capacity - 38 litres (10 gallons)

Rear diff/final drive fluid capacity - 47 litres (12.4 gallons)

Circle gearbox fluid capacity - 7 litres (1.8 gallons)

Tandem case fluid capacity - 64 litres (16.9 gallons).

3.1.3 Blade

Mouldboard height - 610 millimetres (24 inches)

Mouldboard width - 3658 millimetres (12 feet)

Mouldboard thickness - 22 millimetres (0.87 inches)

Maximum depth of cut - 715 millimetres (28.1 inches)

Side shift left - 524 millimetres (20.6 inches)

Side shift right - 660 millimetres (26 inches)

Blade pull at maximum weight - 19135 kilograms (42184 pounds)

Blade down pressure -13017 kilograms (28697.6 pounds)

3.1.4 Front axle

Ground clearance - 600 millimetres (2 feet)

Wheel lean - 18 degrees

Total oscillation - 32 degrees

3.1.5 Hydraulic Controls

Pump type - Axial piston

Pump flow - 206 litres per minute (54.4 gallons per minute)

Relief valve pressure - 24150 kilopascal (3500 pounds per square inch).

3.1.6 Transmission

Type - Direct drive, power shift

Maximum forward speed - 44 kilometres per hour (27.4 miles per hour)

Maximum reverse speed - 34.7 kilometres per hour (21.6 miles per hour)

Number of forward gears – 8

Number of reverse gears - 6

3.1.7 Circle specifications

Diameter - 1530 millimetres (60.2 inches)

Shift left - 695 millimetres (27.4 inches)

Shift right - 728 millimetres (28.7 inches)

Maximum reach outside tyres left - 1896 millimetres (74.6 inches)

Maximum reach outside tyres right - 1978 millimetres (77.9 inches)

Maximum lift above ground - 480 millimetres (18.9 inches)

Blade tip angle front - 40 degrees

Blade tip angle rear - 5 degrees

3.1.8 Steering specifications

Turning radius - 7.5 metres (24.6 feet)

Articulation L/R - 20 degrees

3.1.9 STARTERS, BATTERIES AND ALTERNATORS

- Alternator, standard (150 amp)
- Alternator, ducted (150 amp)
- Batteries, standard, 1,000 CCA
- Batteries, cold weather, 1,000 CCA

3.1.10 ELECTRICAL

- Lighting groups*
- Lights, six halogen work lights
- Lights, premium, 10 LED lights
- Lights, sweeps, eight halogen lights

3.1.11 OPERATOR ENVIRONMENT

- ROPS CAB
 - Cab glass options
 - Glass, single pane
 - Air conditioning
 - Cab seat
 - Seat, cloth, air suspension
 - Visibility arrangement
 - Rear vision camera
 - Power supply
 - In cab – 12V and 24V
 - Screens
 - Screen group – sun
 - Rear screen – cab
- * Lights for Rippers included in Ripper Arrangements

4. Equipment monitoring hardware / software

The equipment must be fitted with hardware / software to facilitate online real monitoring of the following:

- ✓ Location tracking

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- ✓ Hours
- ✓ Fuel usage
- ✓ Productivity
- ✓ Diagnostic codes

5. Warranty

One year or 0 – 2500 hours standard, extended to 6000 hours on power train components

6. Delivery of Equipment

- Delivery of fully finished product within 15 days of order
- Supplier must deliver/transport product within 500 km radius of Johannesburg
- Commissioning of product must be within 3 days after delivery on site.

7. After Sales Support

- 24/7 technical support and parts/spares sales (during warranty period)
- Average response time of 9 to 24 hours on warranty breakdowns and warranty services
- 90% first peak spares availability at the suppliers' premises/stores
- 7- 14 days turn-around time to import spares not available locally
- Supplier to provide free technical training for 3 x Artisans on this model of the equipment
- Supplier to provide free product operational training on site for 3 x Operators and Supervisors within +/- 30 days of delivery of the equipment.
- Supplier must have an existing well equipped ISO certified premises and workshops
- Supplier to conduct quarterly machine health monitoring inspections and submit reports to Plant Management

8. Recommendations

Recommendations from a technical aspect will be based on the following:

- Machine complies with the above required specifications
- Price
- Product availability
- Technical specification compliance

9. Score card

Scoring will be allocated on the three areas listed below with a 70% threshold to be required for consideration.

- OEM or Accredited Distributorship = 10 points
- Capability and Resources = 30 points
- Technical compliance = 60 points

APPENDIX A

Description	Technical Criterion	Scoring Criteria	Weight (%)
OEM or Accredited Distributorship			
Verifiable Proof of OEM status or accreditation	OEM registration or distributorship agreement	10 = Verified and compliant	10
		0 = Not verified and or compliant	0
Capability and Resources			
Proof of OEM repair resources	Inspection of facilities conforming to OEM standards	15 = Acceptable facilities and proof of conformance to OEM standards	15
		0 = Unacceptable standards and or no proof of conformance to OEM standards	0
90% OEM Parts availability in stock	Documentation confirming 90% average parts availability Verification inspection by ERI if required	15 = Compliant	15
		0 = Non-compliant or non - submission	0
Technical compliance			

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Machine specifications	Engine Kw Raised sprocket drive Transmission speeds ROPS cab 6000 hour warranty Circle specifications Mouldboard specifications	31 = Compliant 0 = Non-compliant	31
Equipment monitoring hardware / software as per criteria	Proof of online GPS Location tracking, Hours, Fuel usage, Productivity and Diagnostic codes capability	14 = Compliant 0 = Non-compliant	14
OEM workshop accreditation	Proof of OEM workshop accreditation	10 = Compliant 0 = Not compliant	10
ISO 9001 rating	Proof of current ISO 9001 certificate	5 = Compliant 0 = Not compliant	5
Total Weighted Score			100

Overall minimum threshold for qualification (70%)

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