

## SPECIFICATION RT57-07-01

### 20 TON ARTICULATED DUMP TRUCK (ADT) (160kW)

#### Details of Offer

#### 1. CONDITIONS

In addition to the “**General Specifications**” and the conditions set out in the document "General Conditions of Contract ", the following special conditions shall apply:

TAKE NOTE

##### 1.1 GUARANTEE PERIOD

The machines and equipment shall be guaranteed for a period of not less than one (1) year.

The guarantee period of 12 months shall commence after the successful completion of commissioning on site.

#### 2. SERVICE

Supply and delivery of:

**20 TON ARTICULATED DUMP TRUCK**

#### 3. OPERATING MASS

The net vehicle tare mass of the trucks shall not be less than 14, 5 ton.

The tare mass shall be stated on a non-corrosive plate affixed to the machine in lettering not less than 80 mm high.

The machines shall comply in full with the relevant Road Traffic Ordinances when unladen.

The machines will be licensed for regular on road operation and not as construction vehicles which travel on road for occasional movement between sites only.

Machines which have not been homologated for on road operation will not be accepted.

#### 4. ENGINE

Fitted with a diesel engine, developing not less than 160kW

Engine valve braking shall be provided.

An exhaust brake does not qualify in this regard.

#### 5. TRANSMISSION

The transmission shall be of the powershift type fitted with a torque converter having automatic lock-up.

Six forward and one reverse gears are required.

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The maximum road speed shall be at least 40, 0 kph.

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The inter-axle differential shall be torque proportioning with limited slip or lock facility.

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**6. AXLES**

A 6X4 configuration is required with drive to the front axle and one rear axle.

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Limited slip differentials are required with an inter-axle lock facility.

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**7. SUSPENSION**

The front suspension shall incorporate air bags or cylinders and heavy duty hydraulic dampers.

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Rear axles shall be mounted on rocking beams and rubber suspended.

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Front and rear nitrogen/oil suspension will be considered as an alternative to the above.

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**8. STEERING**

Articulated steering is required.

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Articulation shall be at least 45° to either side.

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Two hydraulic steering cylinders are required.

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The frame shall pivot and oscillate at the steering joint by means of suitable bearings.

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**9. INSTRUMENTS**

In addition to the requirements of paragraph 7 of "General Specifications", the following instruments shall be provided on the instrument panel:

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(a) Tachometer shall be fitted

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**10. FUEL TANK**

The fuel tank capacity shall not be less than 200 litres.

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**11. TYRES**

The truck tyre size shall be 20,5 R25. Suitable earthmover tyres shall be fitted.

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12. BRAKES

Brakes on all six wheels are required.

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A hydraulic retarder shall be supplied.

\_\_\_\_\_

Disc brakes, an exhaust brake and engine valve braking are required.

\_\_\_\_\_

13. CAB

In addition to the requirements of paragraph 6 of “General Specifications”, the cabs shall be equipped with the following:

\_\_\_\_\_  
\_\_\_\_\_

ROPS cabs are required.

\_\_\_\_\_

(a) Sound insulation

\_\_\_\_\_

(b) Vandalism Lock

\_\_\_\_\_

(c) A 1,5kg fire extinguisher of the BCF type or equivalent is required instead of a 9 kg extinguisher as specified.

\_\_\_\_\_  
\_\_\_\_\_

14. HOIST

Two hoist cylinders are required preferably double acting, which shall tip the body to a minimum angle of 65° to the horizontal.

\_\_\_\_\_

Hoist cylinders may be either single or multistage.

\_\_\_\_\_

15. BODY

The bodies shall be of extremely robust design and resistant to impact loading and abrasive wear.

\_\_\_\_\_

Minimum body capacity shall be 11, 0 m³ by SAE 2:1 standards.

\_\_\_\_\_

Bodies shall be of scour back form designed to prevent material spillage.

\_\_\_\_\_

The body floor and side plates shall be manufactured from 10 and 8 mm TH 400 steel or equivalent and the body front from 6 mm TH 400 steel or equivalent.

\_\_\_\_\_  
\_\_\_\_\_

The above description constitutes minimum requirements and Bidders shall provide details of their body design and construction.

\_\_\_\_\_

Bodies shall be provided with spillage guards at the front to protect the cabs.

\_\_\_\_\_  
\_\_\_\_\_

The body side height shall not exceed 3 000 mm.

\_\_\_\_\_

**16. OTHER REQUIREMENTS**

Machines shall be fitted with under run protection.

\_\_\_\_\_

Machines shall be fitted with mudguards over all wheels.

\_\_\_\_\_

\_\_\_\_\_

## TECHNICAL SCHEDULE

The Technical Schedule must be completed in full; failure to comply will invalidate your bid  
Clearly delete/cross-out whichever is not applicable at YES/NO questions

### 1. SALIENT POINT

Make and model	_____
Manufacturer	_____
Country of origin	_____
Operating mass of complete machine equipped as specified	_____ kg
Payload	_____ kg
Overall length	_____ mm
Overall height	_____ mm
Maximum overall width	_____ mm
Front Track	_____ mm
Rear Track	_____ mm
Wheelbase	_____ mm
Mean loading height	_____ mm

### 2. ENGINE

Make and Model	_____
Net power output as specified	_____ kW
Maximum governed speed	_____ rpm
Fuel consumption at full load	_____ l/hr
Make of engine protection system?	_____

### 3. TRANSMISSION

Make	_____
Model	_____
Number of forward gears	_____
Number of reverse gears	_____
Maximum speed forward:	
1 <sup>st</sup> Gear	_____ km/h
2 <sup>nd</sup> Gear	_____ km/h
3 <sup>rd</sup> Gear	_____ km/h
4 <sup>th</sup> Gear	_____ km/h
5 <sup>th</sup> Gear	_____ km/h
6 <sup>th</sup> Gear	_____ km/h
7 <sup>th</sup> Gear	_____ km/h
8 <sup>th</sup> Gear	_____ km/h
Maximum speed reverse:	
1 <sup>st</sup> Gear	_____ km/h
2 <sup>nd</sup> Gear	_____ km/h

**4. TORQUE CONVERTER**

Model \_\_\_\_\_  
Ratio (stall) \_\_\_\_\_

**5. AXLES**

Indicate number of driven axles \_\_\_\_\_  
Are limited slip differentials with an inter-axle lock facility fitted \_\_\_\_\_  
Manufacturers rating – Front \_\_\_\_\_  
Manufacturers rating – Rear \_\_\_\_\_

**6. SUSPENSION**

Front – type \_\_\_\_\_  
Rear - type \_\_\_\_\_

**7. TYRES**

Size and Ply Rating \_\_\_\_\_  
Pressure \_\_\_\_\_ kPa  
Permissible load \_\_\_\_\_ kg  
Ton km per hour rating \_\_\_\_\_

**8. OPERATING MASS**

Operating mass of complete machine equipped as specified (Tare) \_\_\_\_\_ kg  
Front axle – tare \_\_\_\_\_ kg  
Rear axle – tare \_\_\_\_\_ kg  
Front axle – GVM \_\_\_\_\_ kg  
Rear axle - GVM \_\_\_\_\_ kg  
Total – GVM \_\_\_\_\_ kg  
Payload \_\_\_\_\_ kg

**9. LOADING BIN**

Load Capacity (SAE 2:1) \_\_\_\_\_ m<sup>3</sup>  
Struck Capacity \_\_\_\_\_ m<sup>3</sup>  
Bottom plate thickness \_\_\_\_\_ mm  
Bottom plate material \_\_\_\_\_  
Side plate thickness \_\_\_\_\_ mm  
Side plate material \_\_\_\_\_  
Front plate thickness \_\_\_\_\_ mm  
Front plate material \_\_\_\_\_  
Liner thickness, if applicable (bottom x sides x front) \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ mm  
Liner material, if applicable \_\_\_\_\_

<b>10. CAB</b>	
Number of seats	_____
Width of cab	_____mm
Material of manufacture	_____
Half or full cab	_____
Type of alarm device for low oil pressure	_____
Type of alarm device for high water temperature	_____
Is 1,5kg fire extinguisher fitted?	YES / NO
<b>11. TIPPING</b>	
Maximum tip angle	_____degrees
Number of rams	_____
Ram finish	_____
Seconds to maximum tip (fully laden)	_____sec
Seconds to return	_____sec
Type of hydraulic pump	_____
<b>12. BRAKES</b>	
Disc brakes, an exhaust brake and engine valve braking are required.	
Type of brakes fitted	_____
Number of wheels braking	_____
Type of where applied	_____
Is hydraulic retarder fitted?	YES / NO
Is exhaust brake fitted?	YES / NO
Are a fail safe system fitted?	YES / NO
<b>13. STEERING</b>	
Type of hydraulic pump	_____
Turing radius	_____
Angle of articulation	_____
<b>14. HYDRAULIC SYSTEM</b>	
14.1 Steering	_____
Make and model of hydraulic pump	_____
14.2 Output of hydraulic pumps and relief valve pressure	
Steering	_____
Load bin hydraulics	_____
<b>15. FUEL TANK</b>	
Capacity	_____ℓ
Type of water separator fitted	_____
Are the water separator and fuel filters fitted with replaceable elements?	YES / NO
<b>16. AIR CLEANER</b>	

Make and model

Is air cleaner provided with a safety element?

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YES / NO

Are safety elements locally made?

YES / NO

**17. GENERAL**

(a) Are all the required accessories fitted?

YES / NO

(b) Are all drawings, brochures, graphs and sheets submitted?

YES / NO

(c) Is the offer completely to specification?

YES / NO

(d) Is vehicle guaranteed as specified?

**18. GENERAL SPECIFICATIONS**

Does the bid comply with the conditions contained in the "Gene Specifications"?

YES / NO

If not, State all deviations from the specifications

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Please note that failure to furnish all required technical specifications, brochures and information of products offered will invalidate the Bid.