



**Kenya Power**


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# **SPECIFICATION FOR MANUAL OIL PUMP.**

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**MAY 1, 2023**

**KENYA POWER AND LIGHTING CO,LTD  
P O BOX 30099**

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|  | <b>SPECIFICATION FOR<br/>MANUAL OIL PUMP</b> | Doc.No.       |            |
|   |  | Issue No.     | 1          |
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## FOREWARD

This specification has been prepared by the technical services department of Kenya power and lays down minimum requirements for manual rotary Oil pump. It is intended for use in the purchase of oil pump.

Supplier shall submit information which demonstrates satisfactory service experience of the manufacturer with the products which fall within the scope of this specification.

### 1 Scope.

- 1.1 This specification is for single phase oil pump and covers type, constructional and operational features of the pump.
- 1.2 The specification also covers inspection and test of manual rotary oil pump and guaranteed technical Particulars to be filled, signed by the manufacturer and submitted for tender evaluation.
- 1.3 The specification stipulates the minimum requirements for the manual rotary Oil pump acceptable for use within KPLC system and it shall be the responsibility of the manufacturer to ensure adequacy of the design, good workmanship and good engineering practice in the manufacture of the oil pump.

### 2 REFERENCES.

The following documents were referred to during the preparation of the specification, in case of conflict, the requirements of this specification shall take precedence.

### 3 TERMS AND TERMINATIONS.

ASL: Above Sea Level

M: Metres

### 4 REQUIREMENTS.

#### 4.1 Service conditions

The portable generator shall be used under the following environmental conditions.



Operating temperature range -1°C to 40°C with average temperature of 30°C.

Humidity: Upto 95%

Altitude: 2200m asl

#### 4.2 The Manual rotary Oil Pump.

- 4.2.1 The manual oil pump shall be operated by rotary motion of the handle. The pump shall be primed through a priming plug during every initial start of the pump.
- 4.2.2 The design of the manual pump shall have a robust constructed rotary pump, suction pipe. The suction pipe shall have a split out which could be adjusted to suite the height.

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- 4.2.3 The manual Oil pump shall have the suction hose placed in oil drum and the delivery hose in the machine reservoir and vice versa.
- 4.2.4 The working style of the pump shall be rotary vane.
- 4.2.5 The manual Oil pump shall be able to pump at least 500 litres per hour at approximately 150 strokes per minute.
- 4.2.6 The manual oil pump shall have universal fittings
- 4.2.7 The material for the pump body, barrel shall be homogeneous free from manufacturing defects and of robust construction for rugged handling. Aluminum is preferable
- 4.2.8 The seals shall be adequate design and compatible with mineral transformer oil.
- 4.2.9 The Manual oil pump shall have a delivery hose of 6M with control valve at the end together with hose quick connect couplers for connecting the pipes to the pump.
- 4.2.10 The delivery hose shall be braided PVC and transparent with smooth interior wall, fabric reinforced, smooth PVC exterior wall, 1 inch diameter and temperature operating range of -10°C to 90°C.
- 4.2.11 The Overall height of the pump shall be at most 1.5M, the length of the oil outlet pipe shall be between 1.2 and 1.4M, and the inner diameter 1inch.
- 4.2.12 The Oil pump shall have a head range of 10M
- 4.2.13 The pump shall be capable of pumping liquid with a maximum viscosity of 17mm<sup>2</sup>/s at 40°C.

**ANNEXES**


A1. The bidder shall indicate the delivery time of the rotary manual pump and manufacturers experience in the production of the rotary manual pump.

**B TESTS AND INSPECTION.**

B1. The Oil pump shall be able to deliver oil at discharge pressure and discharge rate continuously without leakage at any sealing points till the drum is emptied.

B2. On receipt of the manual pump, KPLC shall undertake a comprehensive inspection of the pump in order to verify compliance with the specification. The equipment stands rejected if any of the requirement is not met and the supplier shall be asked to supply a pump.

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**C MARKING AND PARKING.**

**C1. MARKING**

The manual oil pump shall be marked with direction of rotation and provided with nameplate. The following information shall be legibly and indelibly marked in the nameplate

- a Serial Number and batch number
- b Manufacturers name
- c Type and Model

**D Documentations.**


D1. The bidder shall submit its tender complete with technical documents required by annex A (Guaranteed technical particulars) for evaluation. The technical documents to be submitted (all in English) for tender evaluation shall include the following.

- Guaranteed technical particulars signed and stamped by the manufacturer.
- Manufacturers catalogues, brochures and technical data sheets for Oil pump and accessories.

**5 GUARANTEED TECHNICAL PARTICULAR.**

| Clause Number                  | KPLC requirement    |       | Bidders offer |
|--------------------------------|---------------------|-------|---------------|
| Manufacturers name and address | Specify             |       |               |
| Country of manufacture         | Specify             |       |               |
| Bidders name and address       | Specify             |       |               |
| Scope                          |                     |       |               |
| 1.1-1.3                        | Specify             |       |               |
| 2 Applicable standards         | Specify             |       |               |
| 3 Terms and definition         | Specify             |       |               |
| 4 Requirements                 |                     |       |               |
| 4.1 Service condition          | Minimum temperature | State |               |
|                                | Maximum temperature | state |               |

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|  |                     |       |  |
|--|---------------------|-------|--|
|  | Average temperature | state |  |
|  | Humidity            | state |  |
|  | Altitude            | state |  |
| 4.2 Manual Oil pump requirements                   |                     |       |  |
| 4.2.1 Pump operating method                        | State               |       |  |
| 4.2.2 Design of the pump                           | state               |       |  |
| 4.2.3 Operation of suction and delivery hose pipes | state               |       |  |
| 4.2.4 Pump working style                           | State               |       |  |
| 4.2.5 Pumping rate                                 | state               |       |  |
| 4.2.6 Mounting of fittings                         | State               |       |  |
| 4.2.7 Pump body material                           | state               |       |  |
| 4.2.8 Design of seals                              | State               |       |  |
| 4.2.9 Dimensions of delivery hose pipes            | State               |       |  |
| 4.2.10 Design and diameter of delivery hose        | State               |       |  |
| 4.2.11 Height of the pump                          | state               |       |  |
| 4.2.12 Oil pump head range                         | State               |       |  |
| 4.2.13 Maximum liquid viscosity                    | State               |       |  |
| A  |                     |       |  |
| A1 Delivery time, manufacturers' experience.       | State               |       |  |
| B Test and inspection                              |                     |       |  |
| B1 Inspection and testing                          | State               |       |  |
| B2 Inspection at KPLCs stores                      | State               |       |  |
| A. PARKING AND MARKING                             |                     |       |  |
| C1 Marking   | State               |       |  |
| D DOCUMENTATION                                    |                     |       |  |
| D1 List of required documents for evaluation       | State               |       |  |

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