



Kenya Power

TITLE:

83

**SPECIFICATION FOR
PULLING AND LIFTING
MACHINES**

Part 3: Cable Rollers and Ratchet
Pullers

Doc. No.	KP1/3CB/TSP/09/061-3
Issue No.	1
Revision No.	0
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FOREWORD

This specification has been prepared by the Research and Development Department in collaboration with Distribution Division, both of The Kenya Power and Lighting Company Limited (KPLC) and it lays down requirements for overhead line pulling and lifting machines (cable rollers and ratchet pullers) for use on power lines. It is intended for use by KPLC in purchasing the item.

1. SCOPE

- 1.1. This specification is for pulling and lifting machines for use on distribution power lines by KPLC teams and shall include:
 - a) Cable Rollers
 - (i) Straight cable rollers
 - (ii) Triple Cable Corner Rollers
 - b) Ratchet Puller
- 1.2. The specification also covers inspection and test of the cable rollers and ratchet pullers as well as schedule of Guaranteed Technical Particulars to be filled, signed by the manufacturer and submitted for tender evaluation.
- 1.3. The specification stipulates the minimum requirements for cable rollers and ratchet pullers acceptable for use in the company and it shall be the responsibility of the supplier to ensure adequacy of the design, good engineering practice, adherence to the specification and applicable standards and regulations as well as ensuring good workmanship in the manufacture of the cable rollers and ratchet pullers for The Kenya Power & Lighting Company.

The specification does not purport to include all the necessary provisions of a contract.

2. REFERENCES

The following standards contain provisions which, through reference in this text constitute provisions of this specification. Unless otherwise stated, the latest editions (including amendments) apply:

ISO 9001: Quality management systems -- Requirements

BS EN 1706: Aluminium and aluminium alloys. Castings. Chemical composition and mechanical properties.

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- (i) A durable flat trench high strength aluminium alloy (see clause 4.2.1.3) guide of about 140mm that can also be turned on its side for corner pulls.
- (ii) A 125kg SWL aluminium roller which comes standard with sealed bearing.
- (iii) A roller that shall be placed behind the direction of pull and be offset from centre to reduce the possibility of the roller tipping forward during pulling operations.
- (iv) A general design that shall have an approximate base size of 350mm x 300mm , and weigh 8 kg
- (v) The heavy duty cable rollers shall be suitable for laying cables up to 400mm² cross sectional area. The straight cable roller shall resemble Fig. 1.

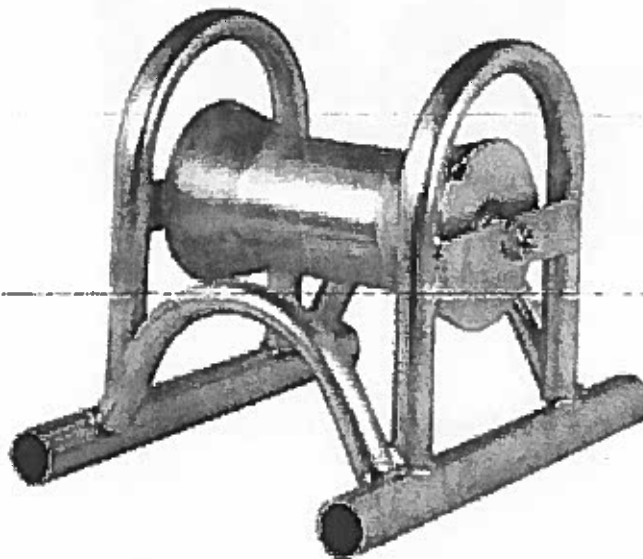


Fig. 1: Straight cable rollers

b) Triple Cable Corner Rollers

- (i) This design shall have two vertical and one horizontal steel roller identical to the straight cable roller (see clause 4.2.1.3 a) for taking the heaviest cables round difficult corners.
- (ii) The assembly shall be of a robust construction for use in the most arduous conditions and can be linked together with stake pins provided to form a continuous corner roller system.

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- 4.2.2.4. The equipment shall drop forged steel slip hooks with robust safety latches and heavy gauge steel reinforced ratchet guard.
- 4.2.2.5. The bolts shall be heat-treated, while the equipment shall have a high tensile fully rotating steel swivel with permanent, comfortable, non-slip grip.
- 4.2.2.6. Each unit shall be supplied with a cable clamp / come along clamp (refer to KP1/3CB/TSP/09/061-1) suitable for gripping low voltage cables in AA of up to 100 sq. mm. The bid shall therefore include per unit cost of the mini ratchet + clamp to form the complete bid for this item and the award for both items (ratchet + clamp) shall be awarded to the same winning bidder.

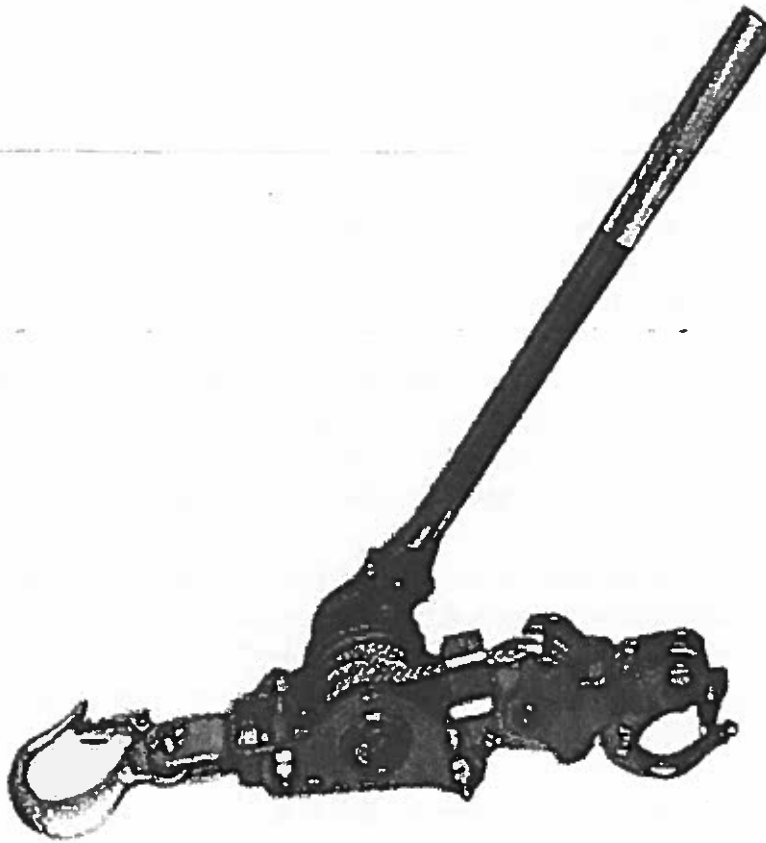


Figure 3: Mini ratchet puller

4.3. QUALITY MANAGEMENT SYSTEM

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6.1. MARKINGS

All cable rollers and ratchet pullers shall be permanently marked with a manufactures trademark and a serial number on a top part of the stick for traceability in English Language.

- a) Standard of manufacture
- b) Identity of the manufacturer
- c) Type reference number
- d) The standard of manufacture
- e) Words "PROPERTY OF KPLC".

6.2. PACKAGING

6.2.1. The cable rollers and ratchet pullers shall be packed in such a manner so as to avoid damage during transportation, handling and storage.

6.2.2. Each cable rollers and ratchet pullers shall be packaged in a waterproof storage bags that help guard against contaminants and abrasion. This shall help maintain their original properties.

6.2.3. The following information shall be printed on a suitable label firmly attached to each packaging:

- a) Purchase order number/tender
- b) Manufacturer's name
- c) Year of manufacture
- d) Insulated hand tools catalog number
- e) The words, "PROPERTY OF KENYA POWER & LIGHTING CO.

7. DOCUMENTATION

7.1 The bidder shall submit its tender complete with technical documents required by Annex A (Guaranteed Technical Particulars) for tender evaluation. The technical documents to be submitted (all in English language) for tender evaluation shall include the following:

- a) Fully filled clause by clause Guaranteed Technical Particulars (GTP) signed by the manufacturer;
- b) Copies of the Manufacturer's catalogues, brochures, drawings and technical data;

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ANNEX A: Guaranteed Technical Particulars (to be filled and signed by the Supplier and submitted together with copies of manufacturer's catalogues, brochures, drawings, technical data, sales records, customer reference letters and copies of certificates/test reports for tender evaluation)

Tender No.

Clause number	Bidder's offer (indicate full details of the offered item for each requirement of the tender & specification)
Bidder's Name	
Manufacturer's Name, address and country	
Type reference/model number of item(s) offered	
Scope:	
1.1 Pulling and lifting machines	
a) Cable Rollers	
(i) Straight cable rollers	
(ii) Triple Cable Corner Rollers	
b) Ratchet Puller	
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6.1.2	
6.2 Marking	

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