



Kenya Power

TITLE:

**CONDUCTOR
RUNNING OUT BLOCK
(ROLLERS) & PULLEY
BLOCK WITH STEEL
SHEAVES**

Doc. No.

KP1/3CB/TSP/09/025

Issue No.

1

Revision No.

0

Date of Issue

2012-01-11

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Signed:

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0.1 Circulation List

COPY NO.	COPY HOLDER
1	Research & Development Manager
2	Procurement Manager
Electronic copy (pdf) on Kenya Power Server (currently :Network-\\stima-fprnt-001\techstd&specs	

0.2 Amendment Record

Rev No.	Date (YYYY-MM-DD)	Description of Change	Prepared by (Name & Signature)	Approved by (Name & Signature)

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FOREWORD

This specification has been prepared by the Research and Development Department in collaboration with Transmission Section both of The Kenya Power and Lighting Company Limited (Kenya Power) and it lays down requirements for conductor running out block (rollers) & pulley block with steel sheaves. It is intended for use by Kenya Power in purchasing the tool.

The supplier shall submit information which confirms satisfactory service experience with products which fall within the scope of this specification.

1. SCOPE

The specifications are for a portable conductor running out blocks made of aluminum and pulley blocks with steel sheaves, rated between 1- 5 tons ideal for running out of conductors, tensioning of conductors and for provision of pivot point used in power lines. The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be of different determined sizes and safe working loads.

2. REFERENCES

- EN DN 15020 Lifting Appliances; Principles Relating to Rope Drives; Calculation and Construction
- EN DN 15401- Lifting hooks for lifting appliances

3. TERMS AND DEFINITIONS

The terms and definitions given in the reference standards shall apply.

4. REQUIREMENTS

4.1 Design and Construction

- 4.1.1 The blocks shall be rugged and robust used as pivot points in power lines upto their safe working loads.
- 4.1.2 The conductor running out blocks (rollers) shall be made of moulded aluminum alloy sheave, with interchangeable nylon protection sleeves mounted in ball race suspension for smooth running and the pulley block shall be made of high quality cast steel.

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- 4.1.3 The block shall consist of maintenance free bearings or other suitable means for providing pivoting.
- 4.1.4 The conductor running out blocks (rollers) shall be a fixed hook assembly but pulley block with steel sheave shall have a swivel hook attached and shall swivel 360° for easy attachment and help maintain axial alignment in use.
- 4.1.5 Surface finishing shall be corrosion resistant and abrasion resistance to a specified degree. The appearance shall be smooth and free of any voids.

4.2 Service condition and operation.

- 4.2.1 The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall NOT require any greasing whatsoever.
- 4.2.2 The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be used in all outdoor conditions without deterioration of bearing lubrication.
- 4.2.3 The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be suitable for use in the saline coastal climate of relative humidity upto 95% and temperatures of 40 degrees Celsius.
- 4.2.4. The equipment shall have provision for easy opening for quick rope assembly.

4.3 Technical specification for Conductor running out blocks (rollers) diameter 300mm

- 4.3.1 The following technical particulars shall be guaranteed by the supplier :

Item No.	Technical description	Kenya Power Technical Requirements	<u>Manufacturer's catalogue, drawing, technical data or tests certificate</u> <u>Reference Page to support the offer.</u>
1	Body material	Moulded Aluminum Alloy Sheave with interchangeable nylon lining	
2	Body finish	Heat treatment or better	
3	Pulley	Mounted in ball race for smooth running and easily interchangeable.	
4	Safe working load	1500 kgs	
5	Hooks		
	i) material	Forged steel	
	ii) movement	360° swivel	
	iii) Safety	Spring loaded gates	
6	Safety Operational features	Manufacturer traceability	

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7	Weight	7-10 Kgs	
8	Dimensions	As per Annex B	
	i) A	300 mm	
	ii) B min	220mm	
	iii) C	30-40mm	
	iv) F max	450	
	v) All other dimensions	Specify	
9	Environmental		
	a)Relative Humidity	Up to 90%	
	b)operating temperature	-1 ⁰ to 55 ⁰ Celsius	
	c)Altitude	Upto 2200m above sea level	
10	Warranty on Equipment	At least 12 months	
11	Safety factor	5:1	
12	Applicable I standards	EN DIN 15020 , EN DN 15401	
13	Test Certificate	Certificate from ISO/IEC 17025 accredited laboratory	
14	Safety, Operation and maintenance manual	Two copies and shall be in English language	
15	Factory Inspection & Acceptance	Two Kenya Power Engineers	

4.4 Technical specification for Conductor running out blocks (rollers) diameter 770 mm

4.4.1 The following technical particulars shall be guaranteed by the supplier:

Item No.	Technical description	Kenya Power Technical Requirements	<u>Manufacturer's catalogue, drawing, technical data or tests certificate</u> <u>Reference Page to support the offer.</u>
1	Body material	Moulded Aluminum Alloy Sheave with interchangeable nylon lining	
2	Body finish	Heat treatment or better	
3	Pulley	Mounted in ball race for smooth running and easily interchangeable.	
4	Safe working load	3000 kgs	
5	Hooks		
	i) material	Forged steel	
	ii) movement	360 ⁰ swivel	

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	iii) Safety	Spring loaded gates	
6	Safety Operational features	Manufacturer traceability	
7	Weight	25-35Kgs	
8	Dimensions (Annex B)		
	i) A	770 mm	
	ii) B min	650mm	
	iii) C	60-70mm	
	iv) F max	1100mm	
	v) All other dimensions	Specify	
9	Environmental		
	a)Relative Humidity	Up to 90%	
	b)operating temperature	-1 ⁰ to 55 ⁰ Celsius	
	c)Altitude	Upto 2200m above sea level	
10	Warranty on Equipment	At least 12 months	
11	Safety factor	5:1	
12	Applicable standards	EN DIN 15020 , EN DIN 15401	
13	Test Certificate	Certificate from accredited laboratory	
14	Safety, Operation and maintenance manual	Two copies and shall be in English language	
15	Factory Inspection& Acceptance	Two Kenya Power Engineers	

4.5 Technical specification for Pulley block with steel Sheaves diameter 200mm

4.5.1 The following technical particulars shall be guaranteed by the supplier:

Item No.	Technical description	Kenya Power Technical Requirements	<u>Manufacturer's catalogue, drawing, technical data or tests certificate</u> <u>Reference Page to support the offer.</u>
1	Body material	Machine cast steel sheaves	
2	Body finish	Epoxy resin paint corrosion resistance	
3	Pulley	Made of steel with a single sheave with maintenance free bushes	
4	Safe working load	2,000Kg	
5	Hooks		
	i) material	Forged steel	
	ii) movement	360 ⁰ swivel	
	iii) Safety	Spring loaded gates	
6	Operation features	Easy to open for rope assembly	

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7	Weight (Max Weight)	9Kg	
8	Dimensions (Annex B)		
	i) B max	200mm	
	ii) B1 max	100mm	
	iii) L max	450mm	
	iv) D1 min	150 mm	
	v) Rope diameter	15mm	
	All other dimensions		
9	Environmental		
	a)Relative Humidity	Up to 90%	
	b)operating temperature	-1 ⁰ to 55 ⁰ Celsius	
	c)Altitude	Upto 2200m above sea level	
10	Warranty on Equipment	At least 12 months	
11	Safety factor	5:1	
12	Applicable standards	EN DIN 15020-2, EN DIN 15401	
13	Test Certificate	Certificate from accredited laboratory	
14	Operation, maintenance and safety manual	Two copies and shall be in English language	
15	Robust features	Compact size	
16	Factory Inspection & Acceptance	Two Kenya Power Engineers	

4.6 Technical specification for Pulley block with steel Sheaves diameter 300mm

4.6.1 The following technical particulars shall be guaranteed by the supplier:

Item No.	Technical description	Kenya Power Technical Requirements	<u>Manufacturer's catalogue, drawing, technical data or tests certificate</u> <u>Reference Page to support the offer.</u>
1	Body material	Machine cast steel sheaves	
2	Body finish	Epoxy resin paint corrosion resistance	
3	Pulley	Made of steel with a single sheave with maintenance free bushes	
4	Safe working load	5,000Kg	
5	Hooks		
	i) material	Forged steel	
	ii) movement	360 ⁰ swivel	
	iii) Safety	Spring loaded gates	
6	Operation features	Easy to open for rope assembly	
7	Weight (Max Weight)	16 Kg	

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8	Dimensions (ref Annex B) i) B max ii) B1 max iii) L max iv) D1 min v) Rope diameter All other dimensions	300mm 120mm 650mm 200 mm 19mm	
9	Environmental a)Relative Humidity b)operating temperature c)Altitude	Up to 90% -1 ⁰ to 55 ⁰ Celsius Upto 2200m above sea level	
10	Warranty on Equipment	At least 12 months	
11	Safety factor	5:1	
12	Applicable standards	EN DIN 15020-2, EN DIN 15401	
13	Test Certificate	Certificate from accredited laboratory	
14	Operation, maintenance and safety manual	Two copies and shall be in English language	
15	Robust features	Compact size	
16	Factory Inspection & Acceptance	Two Kenya Power Engineers	

5. TESTS AND INSPECTION

- 5.1 The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be inspected as per the requirements of this Specification.
- 5.2 In the case of tender award, technical details for the conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be submitted to Kenya Power for approval before delivery.
- 5.3 The conductor running out blocks (rollers) and pulley blocks with steel sheaves shall be inspected during delivery before acceptance to Kenya Power stores.
- 5.4 All the products shall have a means of traceability.

6.0 MARKING AND INSTRUCTION

The following information shall be marked indelibly and legibly on conductor running out blocks (rollers) and pulley blocks with steel sheaves.

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- i) Manufacturer's Name or Trademark;
- ii) Type reference
- iii) Safe working load
- iv) Serial number
- v) Production batch and year of manufacture
- vi) Letters "PROPERTY OF Kenya Power " on the thimble

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 and copies of certificates/test reports for tender evaluation)

Tender No.

Clause number	Bidder's offer (indicate full details of the offered equipment for each requirement of the specification)
1. Scope	
1.1	
4. Requirements	
4.1	
.	
.	
4.2	
.	
4.3	
4.4	
4.5	
4.6	
Test & Inspection	
5.1-5.4	
Marking & Instructions	
6	

.....
Supplier's Name, Signature, Stamp and Date

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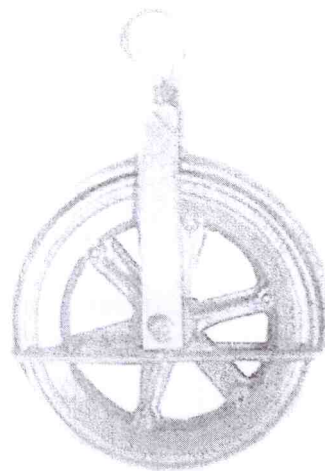
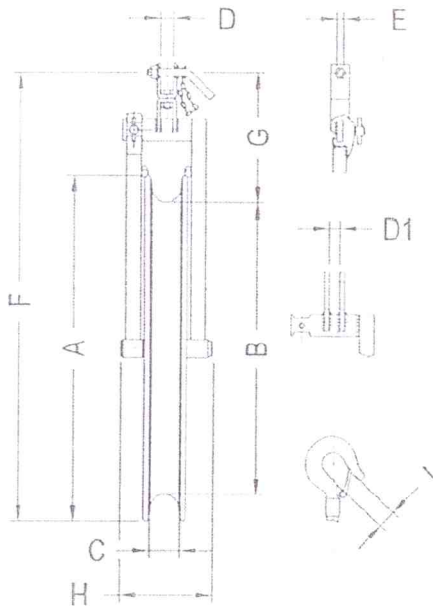
Date: 2012-01-11

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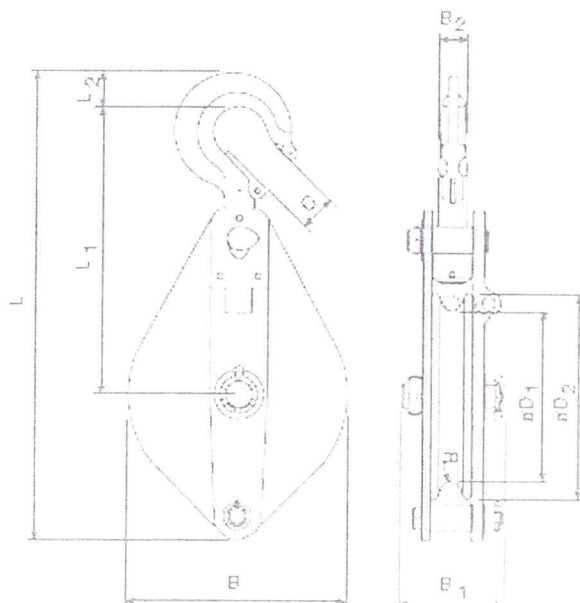
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ANNEX B

DIMENSIONS FOR CONDUCTOR RUNNING OUT BLOCK



DIMENSIONS FOR PULLEY BLOCK WITH STEEL SHEAVES



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