

Company Profile



2024. 04. 01







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Overview M-TEC

Malesela Taihan Electric Cable also known as M-TEC

Has been a leading player in the cable industry in South Africa for over 50 years. Established in 1911, M-TEC has developed into a market leader in the wire and cable industry and today the company is ranked as one of South Africa's largest manufacturers and suppliers of Aluminum overhead conductors, copper products, low and medium voltage power cables and various optical fibre cable

Company location: 273 General, Hertzog

Peacehaven Vereeniging

Company Dimension : $90,000m^2$

Company Workforce: 350 persons

Company shareholder: CIH(51%)

Taihan (49%)

Factory: 5 manufacturing plants

B-BBEE: Level 1









Company Vision & Mission Statement

Mission

We Are All In One To Ensure Customer Satisfaction With Our Best Service On Time

Vision

To Help The World To Become Closer And Brighter

Core Value

Global standard through insight, innovation and Operational Excellence







Shareholder's Profile



Community Investment Holdings (CIH) is a 100% black owned, women led company with a consolidated group turnover in excess of R20 billion, diversified between Healthcare, ICT, Power & Energy, Logistics, Mining and Infrastructure development. Some of its premium investments includes Afrocentric limited(Medscheme), Temo Coal, Jasco Electronics Holdings, Tamasa Investment Holdings as well as property development interests.



https://www.ciholdings.co.za

Dr. Theresa Mokgokong

Group Executive Chairperson
BSc, UB, MB ChB, D Comm (hc)
Honorary Consul General of Iceland in Pretoria.



Mr. Joe Madungandaba

Group Chief Executive Officer

Member of South Africa Institute of Professional Accountants (SAIPA)

University of South Africa(UNISA), Cranfield School of Management (UK)

Wharton Business School (USA).







Shareholder's Profile

X As of 2022

KRW



https://www.taihan.com/en

Established

Korea's first electric cable company (Predecessor company Chosun Electric Wire Co., Ltd. 1941)

1955

Employees

335 in HQ, 541 in factories 663 in branch offices and subsidiaries

1,539

Largest shareholder

*Hoban Group

Hoban E&C Co., Ltd.

Production base



Revenue

2.4505 **Trillion** (\$1.81 billion)

Product & Service

Manufacture, supply and construct cables in fields of electricity, renewable energy, communications and base metal

	1050				
		1978	Built EHV OF cable plant	1996	Built new VCV tower and EHV cable factory
1957	Produced PVC jacket cable	1975	Built Anyang cable plant	1984	Built the Anyang optical fiber cable factory
1955	Established Taihan Electric Wire Co., Ltd.	1968	Listed on the stock exchange	1983	Established the Technology Research Center
1941	Established Chosun Electric Wire Co., Ltd	.1964	Became Korea's first company to export cab	et980	Constructed SCR (Southwire Continuous Rod) factor

1940~1950s I Beginning of history 1960~1970s I Initial establishment of power grid 1980~1990s I Expedited growth of projects

2020s I New Taihan in HOBAN

Largest shareholder changed to Hoban 2021 E&C Co., Ltd.

2023 Broke ground for a submarine cable plant in Dangjin

Community Investment Holdings (Pty) Ltd

Acquired ESG Composite Grade A for 3 consecutive years (KCGS)

2010s I Accelerated global localization

Built Dangjin plant 2011

2016 Established Taihan Vina, a production base in Vietnam

2017 Established Saudi Taihan, a joint venture in Saudi Arabia

2000s I Building global production bases

Founded a South Africa subsidiary M-TEC 2000

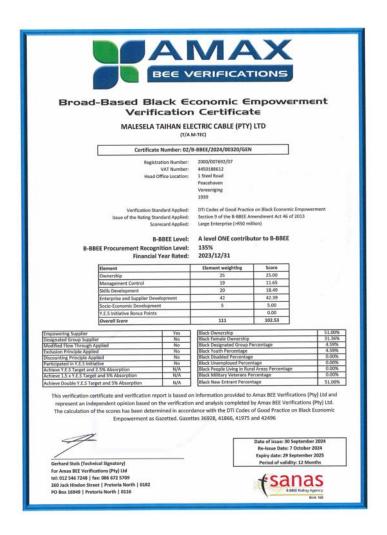
Established TSC, a production base in Vietnam

Won "\$1 billion Export award" on the 4th Trade Day Built Dangjin Cable Accessory Plant





Company B-BBEE Verification



Broad Based BEE status level:

A level ONE contributor to B-BBEE

BEE procurement recognition level: 135%

Black Ownership: 51.00%

Black Women Ownership: 31.36%

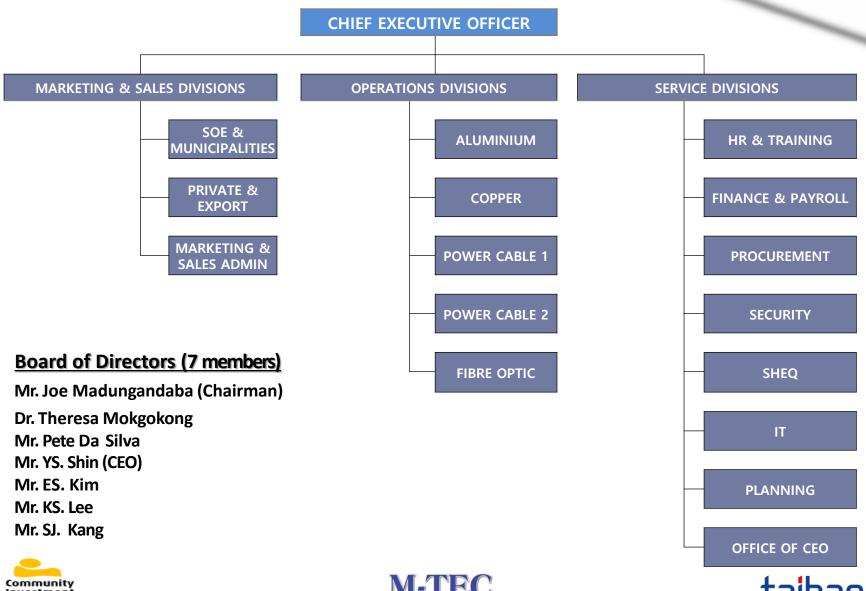
Y.E.S Initiative Applied: No Y.E.S. Initiative







Company Organization









Company History

- 1911 Union Steel Corporation(USKO) was founded
- 1927 Copper conductor, wire & strip produced
- 1961 Aluminum conductor produced
- 1970 PVC Cable produced
- 1980 LV XLPE Cable produced
- 1985 CCV insulation extruder (Nokia) installed, MV XLPE production started
- 1998 USKO's Wire Division was taken over by Malesela Technologies Pty Ltd. (CIH)
- 2000 Taihan Electric/Korea joined with 49 % Shares (CIH 51 %), and renamed as M-TEC
- 2001 Fibre Optic Cable Plant established, supply FOC to Telkom
- 2003 OPGW line was installed (sole manufacturer of OPGW in the Region)
- 2003 SABS ISO 9001:2000 was obtained
- 2011 100 years anniversary
- 2016 33kV XLPE power cable developed (SABS)
- 2017 Bells, Split concentric, control cables, MV ABC developed (SABS)
- 2021 Procure AMSA building
- 2023 Investment for new CCV #2







M-TEC Products in Factory

Power Cable Plant 1

- MV XLPE Cable (1~33kV)
- Mains Copper and Aluminum
- ABC (LV, MV)



Aluminum Plant

- ACSR (66~765kV)
- **AAAC**
- AAC
- Al Strip
- ACCC
- **OPGW**





Fiber Optic Plant

- FTTH Indoor cable
- Fibre Optic Drop Cable
- **ADSS** 3.
- HDD (Heavy duty duct)
- Micro duct Optic Fibre Cable
- 6. CST (Corrugated Steel tape) Armored
- Uni-Tube Metallic (CTS)
- Uni-Tube Non-Metallic





Copper Plant

Power Cable Plant 2

1. Low Voltage Service connection cable

Split Neutral Earth (SNE)

2. Low Voltage Bell Cable

3. Low Voltage Control Cable

Concentric Neutral & Earth (CNE)

- Solid Wire
- Stranded Copper Conductor
- **Bunched Copper Wire**
- 4. Contact Wire for Railway
- 5. Copper Strip











Power Cable 1 Factory

MV Single Core XLPE Cables

(SANS 1339)

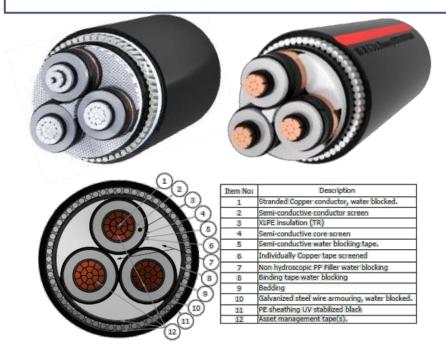
- Conductor: Class 2 of compacted circular or circular stranded plain copper or aluminium
- Size range:
 - ✓ 6.6 & 11kV: 35mm² 300mm² (Cu), 50mm² -630mm² (Al)
 - ✓ 22k: 50mm² 300mm² (Cu), 50mm² 630mm² (Al)
 - √ 33kV: 50mm² 300mm² (Cu), 50mm² 630mm² (Al)

MV 3 Core XLPE Cables

(SANS 1339)

- Conductor: Class 2 of compacted circular or circular stranded plain copper or aluminium
- Size range:
 - √ 6.6 & 11kV: 35mm² 300mm² (Cu), 35mm² -300mm² (Al)
 - √ 22kV: 35mm² 300mm² (Cu), 35mm² 300mm² (Al)
 - ✓ 33kV: 50mm² 300mm² (Cu), 50mm² 300mm² (Al)





Power Cable 1 Factory

Low Voltage PVC / XLPE (SANS 1507)

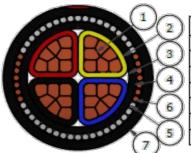
Plain Annealed stranded Copper and Aluminum conductor

- Offering:
 - ✓ 1 Core, Circular Shaped Stranded AL or CU Conductor
 - ✓ 3 / 4 Core, Sector Shaped Stranded AL or CU Conductor
- Size range 0.6 / 1.0 kV & 1.9 / 3.3 kV:

✓ 1 Core : 25 - 630mm²

✓ 3 / 4 Core: 25 - 300mm²





Item	Description
1	Anealed Copper conductor
2	Insulation
3	Separator / binding tape
4	Bedding
5	Steel wire armouring
6	ECC conductor
7	Sheathing

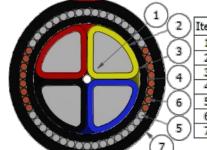
Low Voltage PVC / XLPE (SANS 1507)

Solid Aluminum conductor

- Offering:
 - √ 3 / 4 Core, Sector Shaped Solid Aluminum Conductor
- Size range 0.6 / 1.0 kV & 1.9 / 3.3 kV:

✓ 3 Core : 25 - 300mm² ✓ 4 Core : 25 - 300mm²





-		
:)	Item	Description
5	1	Solid Aluminium conductor
	2	Insulation
	3	Separator / binding tape
</th <td>4</td> <td>Bedding</td>	4	Bedding
\cdot	5	Galvanized steel wire armouring
<	6	Tinned Copper earth continuity conductor
;)	7	Sheathing
4		







Power Cable 1 Factory

MV ABC Cables (SANS 1713)

- Aluminium, XLPE insulated, FR PVC + Catenary Support
- Size Range -Type A (Armoured)
 - \checkmark 95 − 185 mm² (3.8/6,6kV, 6.35/11kV, 12.7/22kV, 19/33kV)
- Size Range -Type B (Unarmoured)

 \checkmark 35 – 185 mm² (3.8/6,6kV, 6.35/11kV,12.7/22kV)

✓ 50 – 185 mm² (19/33kV)



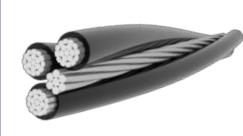


Item	Description
1	Aluminium conductor
2	Semi-conductive conductor screen
3	TR XLPE insulation
4	Semi-conductive core screen
5	Semi-conductive tape
6	Aluminium wire screen
7	Sheath
8	Binding tape
9	Steel catenary strand
10	Catenary insulation

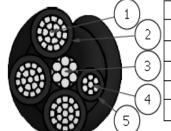
ABC (Aerial Bundled Conductor) (SANS 1418)

- ABC cable manufactured by M-TEC complies with SANS 1418 / ESKOM standard DSP 34-1803
- ABC Types:
 - ✓ Self Supported System
 - ✓ Insulated alloy support
 - ✓ Bare Neutral Support
- Size range 0.6 / 1.0 kV:

✓ 25mm² - 120 mm²







	Item	Description					
(1	Phase Conductor Aluminium					
<	2	Phase Core LV XLPE Insulation					
")	3	Bare Support Core Aluminium Alloy					
5	4	Auxiliary Conductor Aluminium					
\mathcal{I}	5	Auxiliary Core LV XLPE Insulation					







Power Cable 2 Factory

Low Voltage Control PVC SWA Cable

(SANS 1507)

Plain Annealed stranded copper conductor to SANS 1507

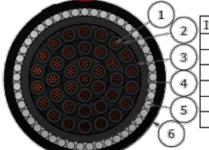
• Size range - 0.6 / 1.0 kV:

 \checkmark 5 Cores : 1.5 − 16mm² \checkmark 7+ Core : 1.5 − 4mm²

5, 7, 12, 19, 24, 27 and 37 core Control cables are most common;

However M-TEC is capable of manufacturing other core numbers on request.





Item	Description
1	Annealed Copper conductor
2	PVC insulation
3	Binding /separator tape
4	Bedding
5	Steel Wire Armour
6	Sheath

Low Voltage Bell PVC SWA Cable

(SANS 1507)

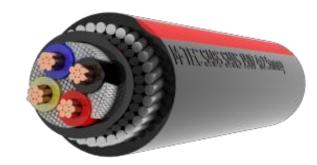
Plain Annealed stranded copper conductor to SANS 1507

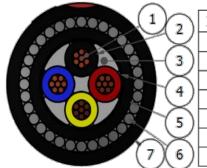
• Offering:

✓ 2/3/4 Core, Copper stranded circular

• Size range - 0.6 / 1.0 kV & 1.9 / 3.3 kV:

✓ 2/3/4 Core: 1.5 - 25mm²





Item	Description
1	Annealed Copper conductor
2	Insulation
3	Filler
4	Binding tape
5	Bedding
6	Steel wire armour
7	Sheath
	1 2 3 4 5







Power Cable 2 Factory

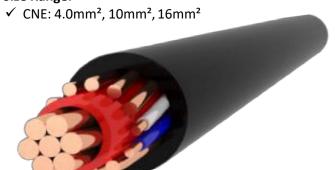
LV Service Connection Cable - CNE

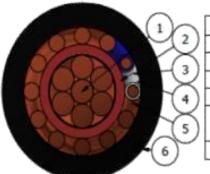
(SANS 1507-6)

Concentric Neutral & Earth (CNE)

Plain hard drawn stranded copper conductor to SABS 1507-6 /ESKOM Specification DISSCAAC7

Size Range:





Item	Description					
1	HD Copper conductor					
2	XLPE Insulation red UV stable					
3	Bare Copper concentric wires					
4	Pilot conductor					
5	Communication cores PE insulated white and blue					
6	PE sheath UV stable					

LV Service Connection Cable - SNE

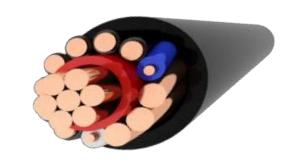
(SANS 1507-6)

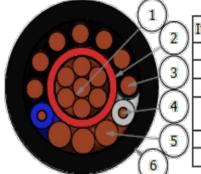
Split Neutral & Earth (SNE)

Plain hard drawn stranded copper conductor to SABS 1507-6/ ESKOM Specification DISSCAAC7

• Size Range:

✓ SNE: 10mm², 16mm²





Item	Description
1	HD Copper conductor
2	XLPE insulation red UV stable
3	Black PE covered neutral wires
4	Communictaion cores PE insulated white and blue
5	Bare earth conductor wires
6	PE sheath UV stable
	1 2 3 4







Aluminium Factory

Aluminium Overhead Conductors 66kV-765kV range (SANS 182-3)

- AAC All Aluminium Conductors
- AAAC Aluminium Alloy
- ACSR Aluminium Conductors Steel Reinforced
- ACCC (High Temperature Low Sag)





Aluminium Wire (SANS 182-2)

- EC Grade (1350):
 - ✓ 0.30mm to 9.00mm diameter



Alloy Wire (SANS 182-2)

- Alloy grades:
 - ✓ 1.50mm to 8.50mm diameter
 - ✓ straight lengths up to 6m



Aluminium Strip (SANS 182-2)

Size Range:

• 3.3 mm × 1.90 mm up to 19.0 mm × 3.0 mm



Aluminium Profiles (SANS 182-2)

Profile:

- Sector Shaped Solid Conductors
- 90°, 120°, and 180° Sectors

Size Range:

• 25 mm² up to 300 mm²









OPGW Factory

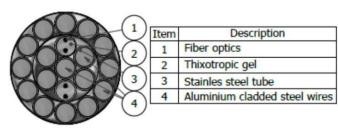
Optical Fibre Ground Wire(OPGW)

M-TEC's OPGW series provide an entirely new form of telecommunication in that is made up of a ground for aerial power lines, which contain optical fibers. The product is designed to resist strong winds, lighting and short circuit current. This product meet both the electrical and mechanical equivalent of conventional ground wire.

General Application:

- Power line protection system
- Power line operation system
- Maintenance data information system
- Monitoring & controlling electrical power system



















Product Profile

M-TEC Product Profile (1/	2)	
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							Armouring				
		No Of	Copper f Size	Aluminium Size Range	Water	Metallic	Туре А		Туре В	Sheath	Specification with Certificate
Product Category		Core(s)	Range (mm2)	(mm2)	Blocking	Core Screen	SW A	AW A	None		
Medium Voltage Power Cable	3.8/6.6 kV – 19/ 33 kV XLPE	1/3	50-300	50-630	WB or Standard	CTS/ CWS	YES	YES	YES	FR, LH, ZH, PE	SANS
	ABC 3.8/ 6.6 kV – 19/ 33 kV XLPE	3	-	95-185	-	CTS	-	YES	YES	FRPVC	SANS
	1 kV (CP/AP/APS)	1/3/4	16-630	25-360	-	-	YES	YES	YES	FR, LH, ZH, PE	SANS
	3.3 kV (PVC/XLPE)	1/3	16-630	25-360	-	-	YES	YES	YES	FR, LH, ZH, PE	SANS
eg eg	ABC 1 kV XLPE	2/3/4/5	-	25-120	-	-	-	-	-	XLPE (Insulation)	SANS
Low Voltage Power Cable	Bells (1kV)	2, 3, 4	1.5-16	-	-	-	YES	YES	YES	FR, LH, ZH, PE	SANS
	Control (1kV)	7, 12, 19 27, 37	1.5-4.0	-	-	-	YES	YES	YES	FR, LH, ZH, PE	SANS
	Service Connection (CNE/SNE)	1	4.0-16	-	-	-	-	-	-	PE	SANS

Abbreviations

CTS: Copper Tape Metallic Screen

CWS: Copper Wire Metallic Screen

AWA: Aluminium Wire Armour (non-magnetic)

SWA: Galvanized Steel Wire Armour



Type A: Armoured Cable T ype B: Unarmoured Cable

YES*: SWA Cable is Intended for DC applications only Y ES#: AWA Cable can be Manufactured but not Common





Product Profile

		N	I-TEC Product Profile (2	/2)				
	Product Category	Aluminium Size Range			Specification			
	AAC							
Ę	AAAC					SANS/IECBS/ASTM		
اق	ACSR	All sizes range from 7 – 61 stands according						
Aluminium	ACCC							
4	OPGW	Optical Ground Wire	NRS/ IEC/ IEEE					
Product C	ategory	Copper Size range	Technical Specification	n				
	Wire	0.45mmØ – 20.0mmØ	BS 13602, BS 13601					
	Bunched	1mm²-35mm²	Customer Specification, SANS 1411					
	Strand	1mm²-630mm²	SANS 1411, SANS 182, BS 78	SANS				
Copper	Strip	3.00mmx 2.00mm- 30.00mmx 4.00mm	Customer Specification			1		
00	Contact Trolley Wire	80mm ² , 107mm ² , 161mm ²	Transnet BS23-1970					
	CCS	16mm²-70mm²	Copper Cladded Steel Earth Conductor			Customer Specification		
	CCA	16mm²-630mm²	Copper Cladded Aluminium Conductor					
	Product Category	Size Range	Max Span	Fibre Range		Specification		
	Arial	Short Span (SSA)	100m		Spotmano			
		Medium Span (MSA)	250m					
<u>e</u>		Long Span (LSA)	250m-400m	4-144 Fibre				
Cab		Extra Long Span (XLSA)	400m-800m					
Fibre Optic Cables	Underground	HDD Single Sheath			In accordance	ce with various National and International		
Ö		HDD Double Sheath				s, i.e. – Telkom, MTN, Neotel, Vodacom,		
ore		HDD Blow In		4-144 Fibre	Cell- C, Eskom, Transnet, IEC, etc.			
臣		CST Single Sheath						
		CST Double Sheath						
	Micro	Micro Duct		4-144 Fibre				
		FTTH Drop	2-12 Fibre					
		FTTH Indoor		2-12 Fibre				







Copper Factory

Copper Wire Conductors and Strip (SANS 182-1)

Contact Wire (trolley wire)

• Size range: 80mm² to 161 mm²

• Condition: Hard drawn to BS23 / BS EN 50149

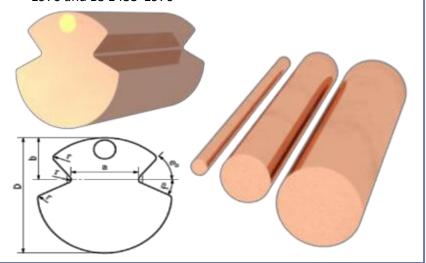
Solid Copper wire

Single wire size range:

• From 0.20mm up to 19.00mm diameter

Condition:

Annealed, hard drawn and medium hard to BS 4109
 1970 and BS 1433-1970



Copper Wire Conductors and Strip (SANS 182-1)

Rotor Bars

Size range: to customer specification

• Condition: Hard drawn to BS 1433 - 1970

Copper Strip

• Condition: Hard drawn, medium hard or annealed to BS 1432 – 1987

Bunched Conductors

• Various configurations to customer specifications

Copper Conductor

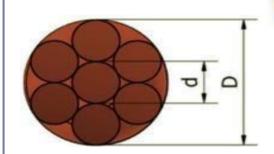
Stranded copper wire:

• From - 1.0mm² to 630mm²

Condition:

Annealed: SABS 1411 Part 1-1986

Hard drawn: SABS 182 Part 1-1973











Fibre Optic Factory

Product Category		Size Range	Max Span	Fibre Range	ADSS	
Fibre Optic Cables	Arial	Short Span (SSA)	100m	4-144 Fibre	7.555	1
		Medium Span (MSA)	250m		HDD	
		Long Span (LSA)	250-400m			
		Extra Long Span (XLSA)	400-800m			
	Underground	HDD Single Sheath		4-144 Fibre	CST	
		HDD Double Sheath				
		HDD Blow-In				
		CST Single Sheath			Micro	
		CST Double Sheath				() ()
	Micro	Micro Duct		4-144 Fibre 2-12 Fibre	FTTH	
		FTTH Drop				
		FTTH Indoor				



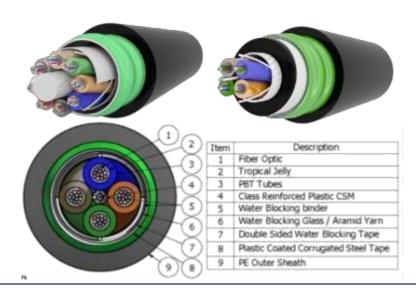




Fibre Optic Categories

Corrugated Steel Tape (CST) Cable for Direct Buried

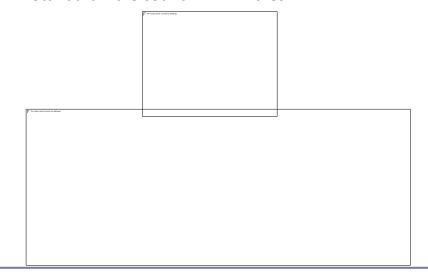
- Multimode and single Mode
- Rodent and termite resistant
- Corrugated steel tape amour
- Application: Direct buried or hauled into ducting
- Standard fibre count: 2-144 fibre's



All Dielectric Self Supported (ADSS)

- Aerial Cables

- Multimode and single Mode
- Round aerodynamical stable design
- · Aramid pheripiral strength members
- Water Blocking (optional)
- Anti-Track sheath (optional)
- Application: Strung in air between supports
- Standard fibre count: 2-144 fibres









Accreditation and Certification

✓ ISO 9001

✓ ISO 14001

✓ ISO 45001

✓ SANS 182-1

✓ SANS 182-2

✓ SANS 182-3

✓ SANS 1339

✓ SANS 1507-3

✓ SANS 1507-4

✓ SANS 1507-5

✓ SANS 1507-6

SANS 1713

✓ SANS1418-1

✓ SANS1418-2



Quality Management System

Environmental Management

Health & Safety Management

Copper Wire & Stranded Copper Conductors

Stranded Aluminium Conductors

Aluminium Conductor, Steel Reinforced

MV XLPE Distribution Cables (3.8/6.6kV to 19/33kV)

PVC Distribution Cables

XLPE Distribution Cables

Halogen Free Distribution Cables

Service Connection (CNE/SNE) Cables

MV ABC Cables (3.8/6.6kV to 19/33kV)

LV ABC Cores

LV Assembled ABC Conductor













Thank you