



years of excellence

GUPTA POWER

PRESENTS

RHINO 

# CATALOGUE

## LT/HT CABLES



Standards: BS, IEC, EN, ASTM, NF, VDE, ANSI, UL & IS Standards with CE marking

An ISO 9001: 2008, IS014001 & OHSAS 18001 CERTIFIED

GUPTA POWER®  
PRESENTS  
RHINO 

SMART CONDUCTORS | CABLES  
WIRES | OFC | LED LIGHTING | EPC  
WIRE RODS | SOLAR

# COMPANY PROFILE

## ABOUT GUPTA POWER

Gupta Power Infrastructure Ltd. (GPIL), the flagship company of JRG Group that specializes in cable and conductors with its own EPC division for turnkey projects. Since 1961, we at Gupta Power have created quality products and services backed by through research. Our diligent efforts have been duly recognised with prestigious ISO 9001:2008, 14001:2004 and OHSAS 18001:2007 accreditation.

We offer a vast portfolio of products that includes Power Cables, Instrumentation Cables, Thermocouple Cables, Overhead Conductors, House Wires, LED Lights and much more.

Over time, we have upgraded to cutting edge technology to meet the stringent need of the customers. A specially formulated quality control regimen monitors every innovation and its application from conception to execution. Our 50 years of diligence and perseverance has today paid off in significant brand presence and trade relations that span the globe.

With an experience of more than repetitive into power industry, we realize the efficient way of energy utilization. Rhino LED lighting solution is a smart move to provide our customer a better lighting experience through innovation. We offer a wide range of LED lights for varied applications. Reliability, Energy efficiency and Durability is what we concentrate on.

### MISSION

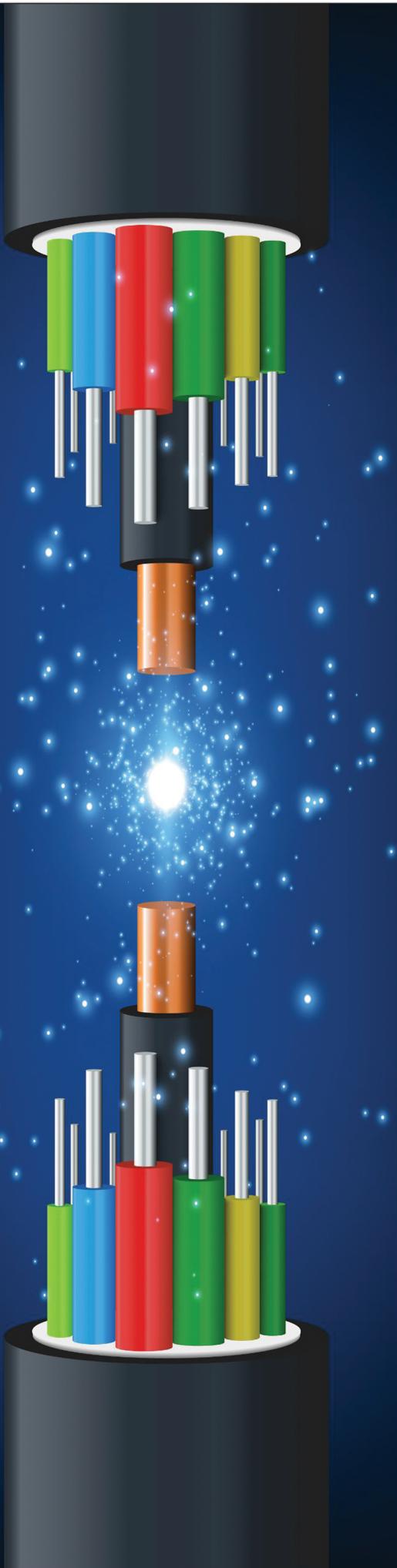
Touching Lives, Empowering People.

### VISION

To be an internationally reputed brand that delivers world class products and services in terms of their quality and technology used, to ensure 100% consumer satisfaction without losing focus on its employee welfare.

### GUPTA POWER INFRASTRUCTURE LIMITED





## PRODUCT RANGE

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- L.T. PVC & XLPE Power Cable with Aluminum and Copper Conductor
- L.T. PVC & XLPE Control Cable with Copper Conductor
- H.T. Power Cable up to 66 kV
- L.T. & H.T. Aerial Bunched Cable (ABC)
- Fire Survival Cable (FS)
- Zero Halogen Cable
- Instrumentation Cable
- Thermo Couple / Compensating Cable
- Railway Signaling Cable
- Mining Cable
- Building Wires - FR / FRLS-H / ZHFR
- Single core industrial Flexible Cable - FR/ FRLS-H/ ZHFR
- Multi core industrial flexible cable
- SUBMERSIBLE Flat and Round Cable
- SOLAR Cable
- Copper / Steel Braided Cable
- Telephone Switch Board Cable
- Optical Fiber Cable
- Conductor AAC / AAAC / ACSR / ACAR
- Conductor HTLS (STACIR / ACSS / TACSR / HVCRC)
- LED Lighting
- Airfield lighting cable
- Wire Rod (Aluminum and Alloy as per AA / 1XXX / 5XXX / 6XXX / 8XXX

# SELECTION OF CABLES

The Following factors are important when selecting a suitable cable construction which is required to transport electrical energy from the power station to the consumer:

- Maximum Operating Voltage
- Insulation Level
- Frequency
- Load to be circuit
- Magnitude and duration of possible overload
- Magnitude and duration of short-circuit current
- Voltage drop
- Length of line
- Type of installation.
  - Underground (direct or in duct)
  - In air
- Chemical and physical properties of soil
- Max. and min. ambient air temperatures and soil temperature.

## Voltage

The standard rated voltage of a cable is denoted by  $U_o/U$  ( $U_m$ )

### Where

$U_o$  :is the rated power-frequency voltage between conductor and earth or metallic screen.

$U$  :is the rated power-frequency voltage between conductors.

$U_r$  :is the maximum continuously permissible operating voltage of a cable at time or in any part of the network.

$U_o/U$ (kV)	0.635/1.1	1.9/3.3	3.3/3.3	3.8/6.6	6.35/11	11/11	12.7/22	19/33
$U_m$ (kV)	1.2	3.6	3.6	7.2	12	12	24	36

## Standards

Cable described in the catalogue are standard types, and their performance has been proved in operation. Construction and test are accordance with the recommendation of IS / IEC publications where ever applicable. Power cables in accordance to other standard (e.g. BS, HD, NEMA) can be manufactured upon customer's request.

## Weight and Dimension

Weight and dimension are approximate.

The deviations are due to manufacturing tolerance.

## Cable Marking

Standard embossing / printing marking:

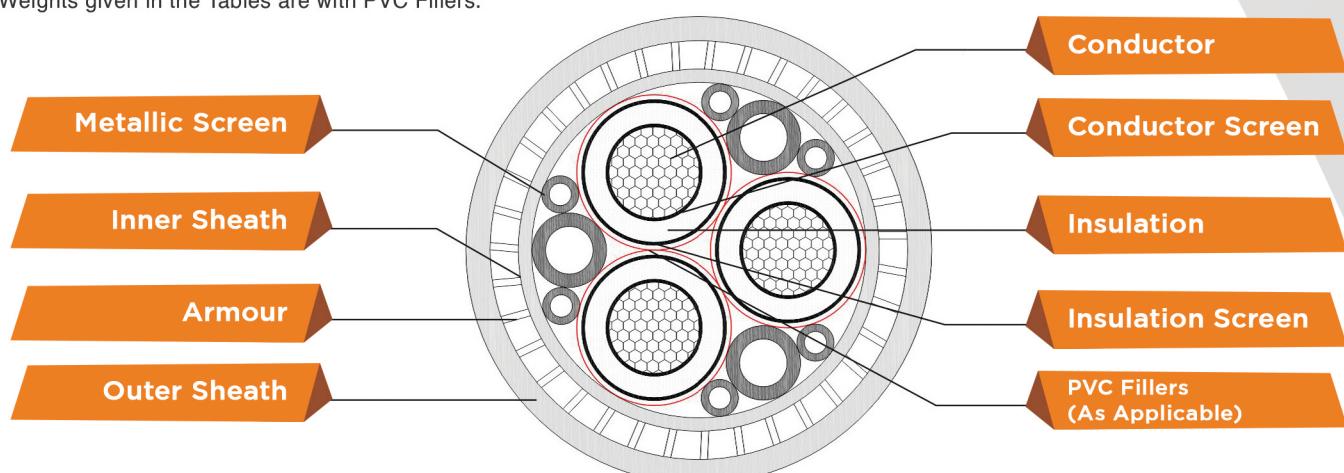
- Name of the manufacturer "GPIL-RHINO"
- Type designation, size of cable, rated voltage
- Year of manufacturing
- The Incremental Sequential marking at every meter (by printing)
- Any special requirement on request

# CONSTRUCTION OF HT CABLES

<b>► Conductor</b>	Stranded compacted circular Copper or Aluminium conductor according to IS: 8130 - 1984
<b>► Conductor Screen</b>	An extruded layer of semi conducting material applied over the conductor as voltage stress control layer according to IS: 7098 - 2011
<b>► Insulation</b>	An extruded layer of cross linked polyethylene (XLPE) is applied over the inner semiconductor with thickness as per specified in IS: 7098 - 2011
<b>► Insulation Screen</b>	An extruded layer of strippable or bonded semi conducting compound over insulation. Conductor Screen, XLPE insulation and insulation screen are applied using triple head extruder according to IS: 7098 - 2011
<b>► Metallic Screen</b>	Copper wire / tape, Aluminum wire / tape according to IS: 7098 - 2011 or as per customer requirement
<b>► Assembly</b>	In case of three core cables, cores are assembled together with suitable lay length, non-hygroscopic filler is applied during assembly to fill the spaces between cores then wrapped with suitable binder
<b>► Inner sheath/ Bedding</b>	In case of armoured cables an wrapped / extruded layer of PVC according to IS: 7098 — 2011
<b>► Armour</b>	Galvanised steel, round / formed according to IS: 7098 — 2011
<b>► Outer sheath</b>	An extruded layer of PVC /FR/FRLS/LSOH applied with thickness according to IS: 7098 — 2011.

Flame Retardant (FR), Flame Retardant Low Smoke (FRLS) and Low Smoke Zero Halogen (LSOH) Sheathed HT XLPE cables are also manufactured.

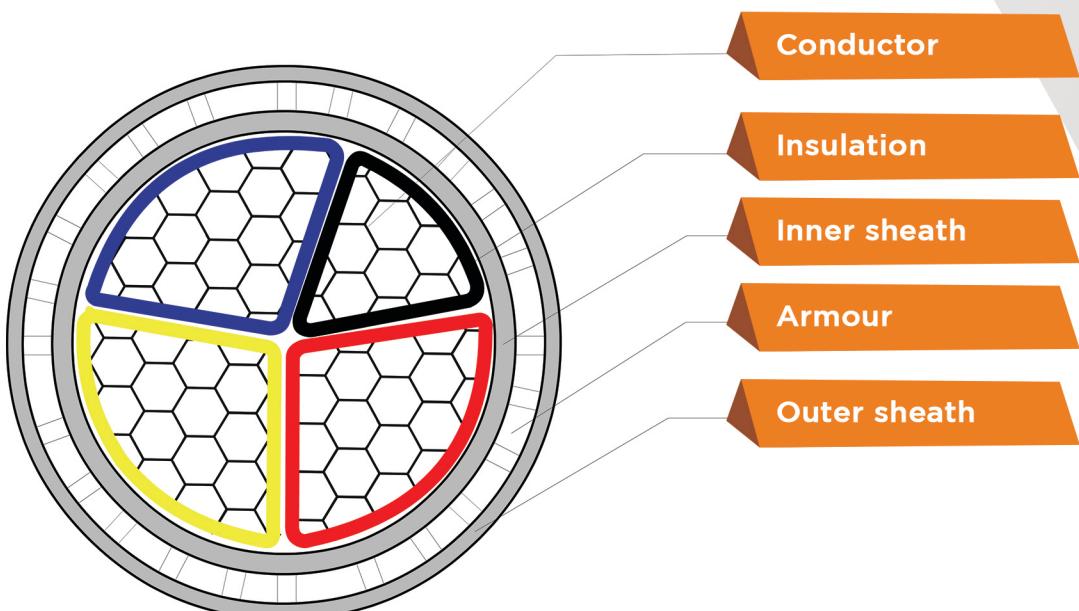
\* Weights given in the Tables are with PVC Fillers.



# CONSTRUCTION OF LT CABLES

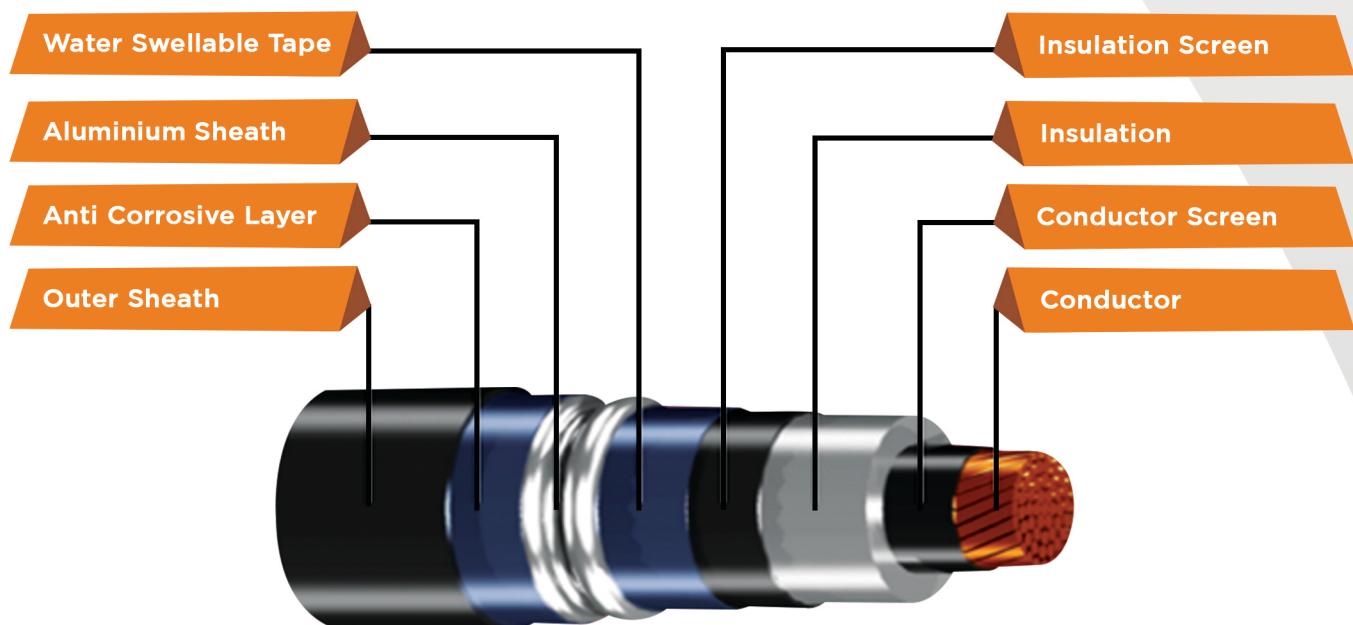
► Conductor	Copper or Aluminium conductor, Solid, Stranded circular/ sector shaped according to IS: 8130 - 1984.
► Insulation	An extruded layer of PVC or XLPE is applied over conductor with thickness as per specified in IS: 1554 (Part 1) — 1988 or IS: 7098 (Part 1) — 1988. PVC insulated cable are suitable for maximum conductor temperature of 70 °C or 85 °C and 90 °C for XLPE.
► Assembly	In case of multi core cables, cores are assembled together using non hygroscopic filler (If required) to fill the spaces between cores then wrapped with suitable binder.
► Inner sheath/ Bedding	In case of armoured cables an wrapped / extruded layer of PVC according to IS: 1554 (Part 1) — 1988 or IS: 7098 (Part 1) — 1988.
► Armour	Galvanised steel, round / formed according to IS: 1554 (Part 1) — 1988 or IS: 7098 (Part 1) — 1988.
► Outer sheath	An extruded layer of PVC /FR/FRLS/LSOH applied with thickness according to IS: 1554 (Part 1) — 1988 or IS: 7098 (Part 1) — 1988.

Flame Retardant (FR), Flame Retardant Low Smoke (FRLS) and Low Smoke Zero Halogen (LSOH) Sheathed LT PVC / XLPE cables are also manufactured.



# TYPICAL CONSTRUCTION FOR EHV CABLE (TYPE-I)

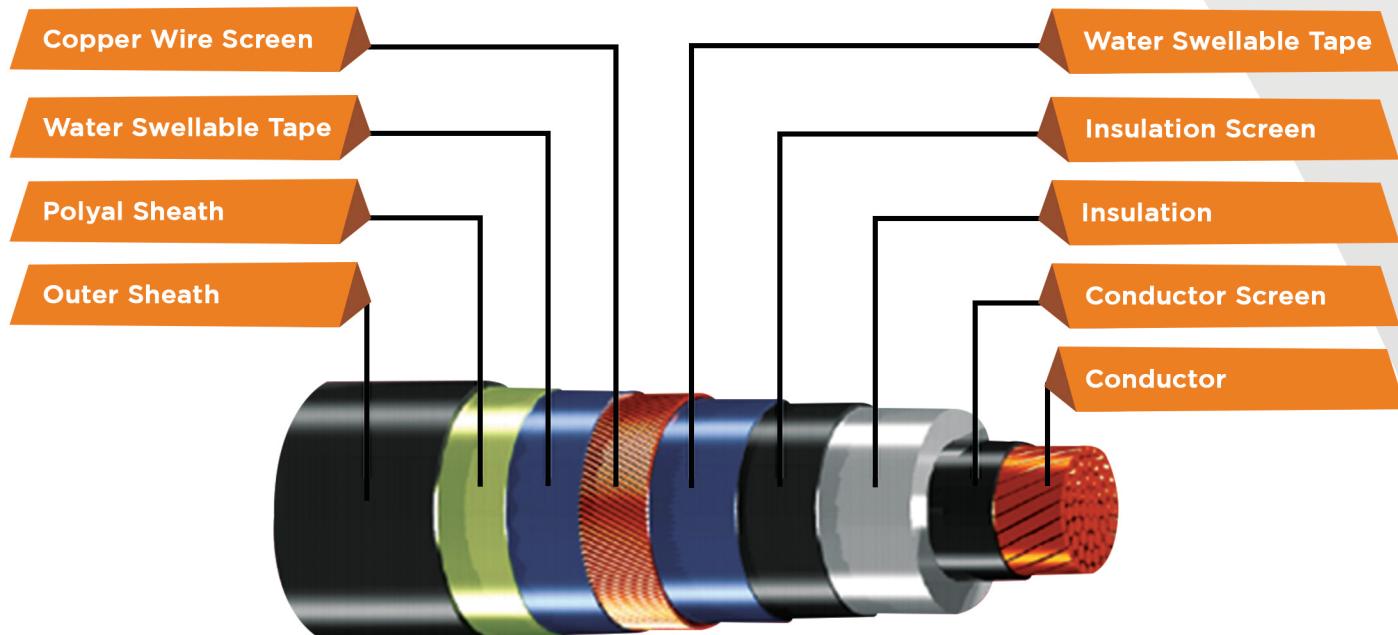
► Conductor	Stranded compacted circular Copper or Aluminium conductor according to IS: 8130-1984/ IEC: 60228-2004.
► Conductor Screen	A combination of semiconducting tape and compound extruded over it to minimize voltage stress over conductor surface.
► Insulation	An extruded layer of cross linked polyethylene (XLPE) of thickness as per IS 7098-3-1993/ IEC: 60840-2004.
► Insulation Screen	An extruded layer of semiconducting compound over Insulation to minimize voltage stress over insulation.
► Water Swellable Tape	A layer of semiconducting water swellable tape is applied helically as protection against radial water penetration.
► Aluminium Sheath	A layer of Corrugated Aluminium sheath is applied longitudinally as longitudinal water barrier, which shall also serve as metallic screen.
► Anti Corrosive Layer	A layer of Bituminous tape is applied over Aluminium sheath to provide protection against corrosion.
► Outer Sheath	An extruded layer of HDPE/PVC is provided as outer jacket of thickness as per IS 7098-3/1993/ IEC: 60840-2004.



Corrugated Aluminium Sheathed Cable

# TYPICAL CONSTRUCTION FOR EHV CABLE (TYPE-II)

► Conductor	Stranded compacted circular Copper or Aluminium conductor according to IS: 8130-1984/ IEC: 60228-2004
► Conductor Screen	A combination of semiconducting tape and compound extruded over it to minimize voltage stress over conductor surface
► Insulation	An extruded layer of cross linked polyethylene (XLPE) of thickness as per IS 7098-3-1993/ IEC: 60840-2004
► Insulation Screen	An extruded layer of semiconducting compound over Insulation to minimize voltage stress over insulation.
► Water Swellable Tape	A layer of semiconducting water swellable tape is applied helically as protection against radial water penetration.
► Copper Wire Screen	A concentric layer of copper wires with open helix copper binder tape is provided as metallic screen to carry the earth fault current.
► Water Swellable Tape	A layer of semiconducting water swellable tape is applied helically as protection against radial water penetration.
► Polyal Sheath	A layer of Poly Aluminium Tape is applied longitudinally as protection against longitudinal water penetration.
► Outer Sheath	An extruded layer of HDPE/PVC is provided as outer jacket of thickness as per IS 7098-3/1993/ IEC: 60840-2004.

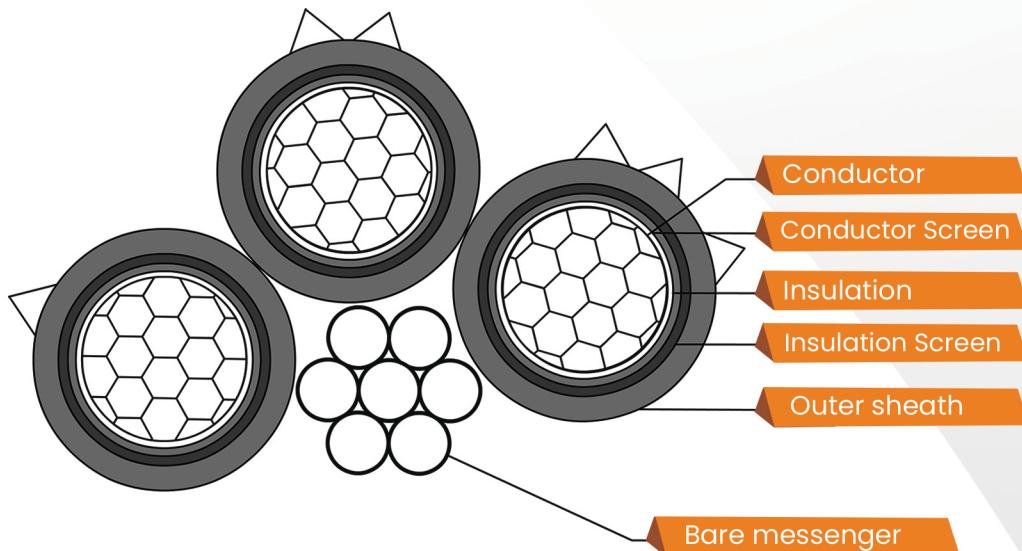


Copper Wire Screened Polyal Tape Cable

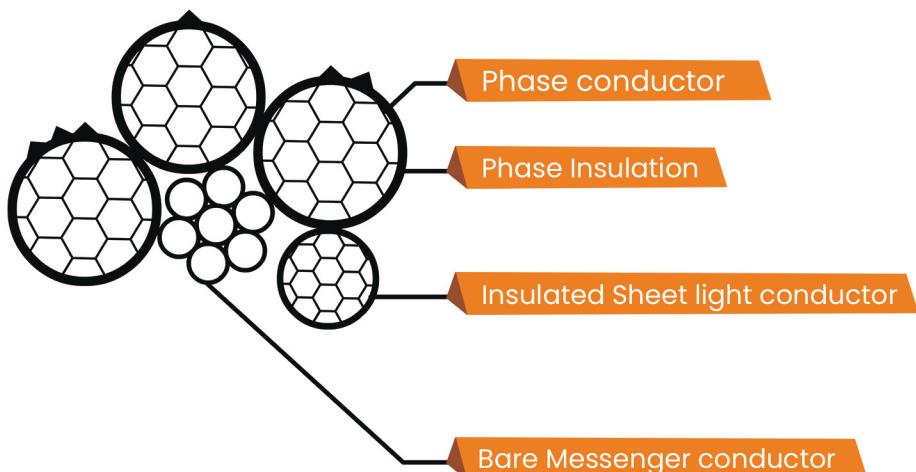
# AERIAL BUNCH CABLE

- 11 kV & 33 kV Aerial Bunched cables are generally used for power distribution
- These cables are lighter in weight and are easy to install.
- The cables are suspended overhead using electrical poles.
- These cables are manufactured by GPIL as per IS 14255, Gen to IS 7098 (Part 2) & IEC 60502.

## HT AB CABLE

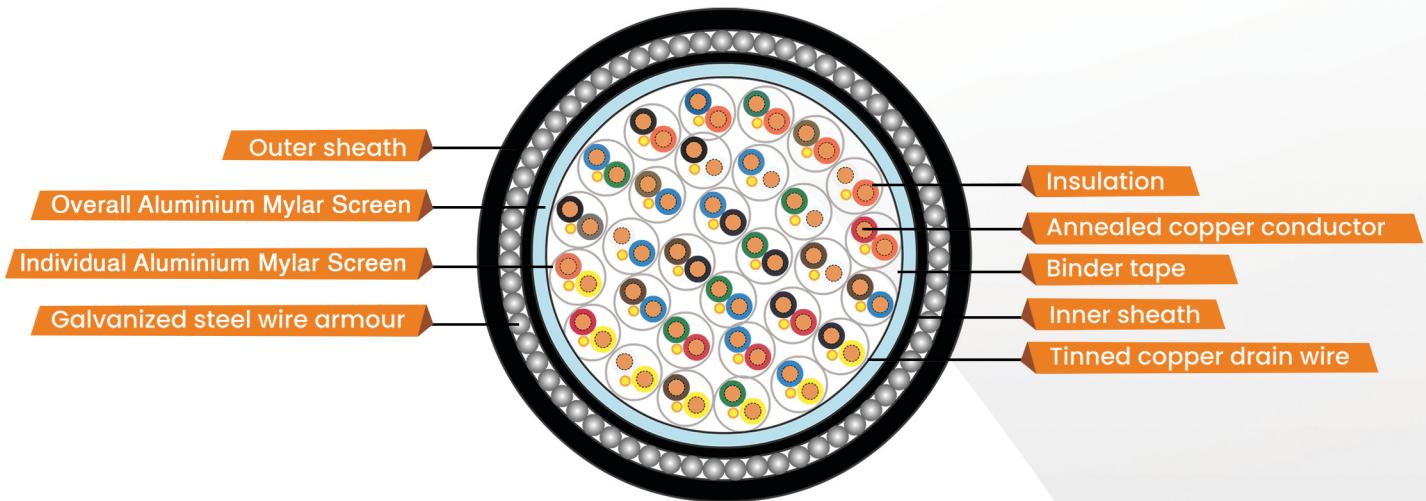


## LT AB CABLE



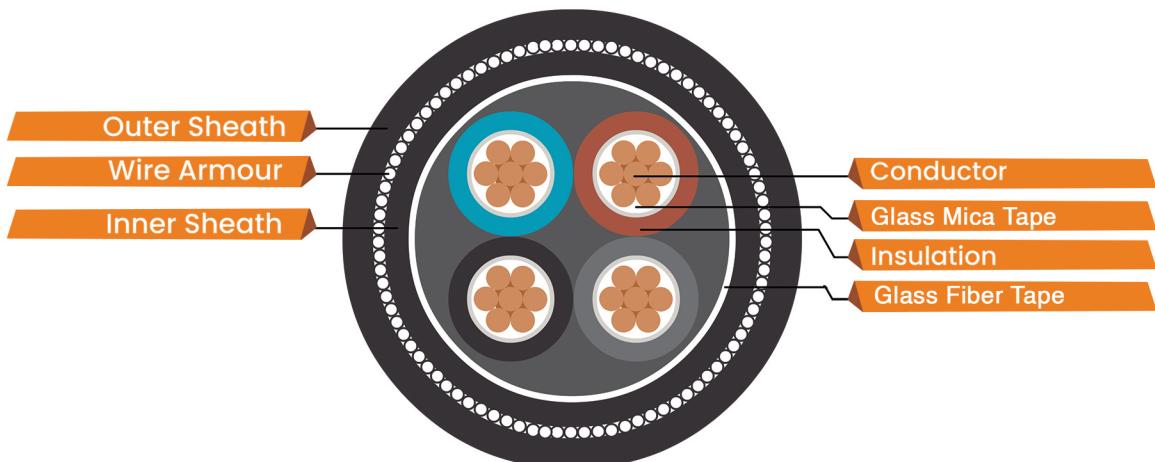
# INSTRUMENTATION SIGNAL CABLE

- Instrumentation Cables are used in normal or hazardous area, suitable for process control, A/D converters and other modern microprocessor based instrumentation circuits.
- These cables are designed to offer excellent resistance to noise and induction phenomena encountered in instrumentation circuits and bring a clean and accurate signal to the control room.
- The sheathing is available with FR and FRLS properties.
- These cables are manufactured by GPIL as per Gen to IS: 1554(Pt – 1), PAS 5308(Pt – 1 & 2), IEC 189 (Pt – 1 & 2), VDE 0815 & 0816, EN 50288-7 and so on.



## FIRE SURVIVAL CABLES (600/1000 V)

- Special construction to withstand 950 °C for three hours. These cables are manufactured by GPIL as per BS 7846 and tested as per BS 6387 and other international standards.
- These cables are used in fixed installations in high occupancy buildings like airport, railways etc and strategically sensitive buildings like defense establishments, industrial areas etc.



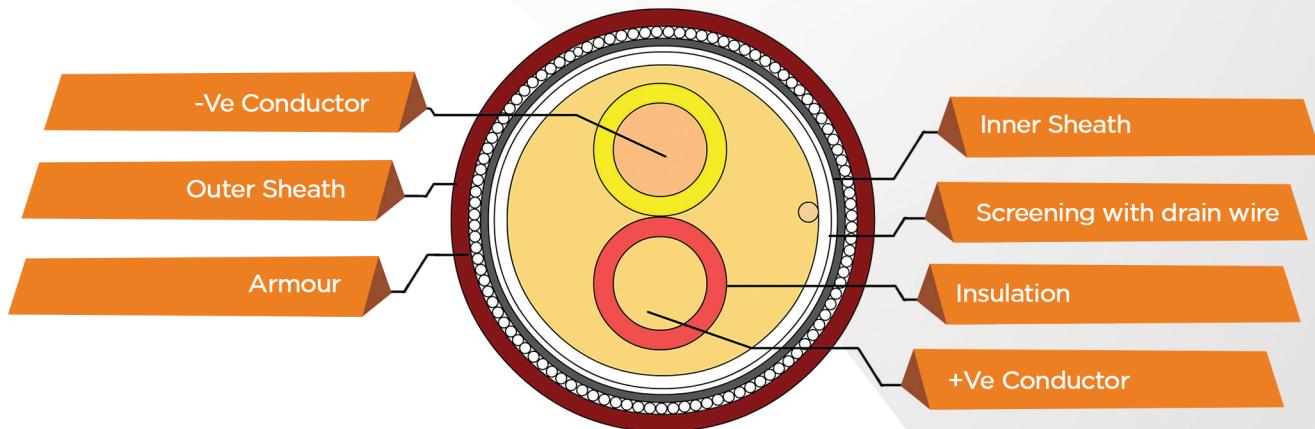
# THERMOCOUPLE CABLES

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- Used in boilers, furnaces and heat treatment industry. These cables are used in processes to sense temperature and are connected to the pyrometers for indication and control.
- These cables are produced with specified alloy conductor, PVC/XLPE insulated, cores twisted to form pairs, individually or overall shielded. These can be armoured / unarmoured and with sheathing with FR/FRLS properties.
- These cables are manufactured by GPIL as per PAS 5308(Pt – 1 & 2), IEC 189 (Pt – 1 & 2), VDE 0815 & 0816, EN 50288-7 and so on.



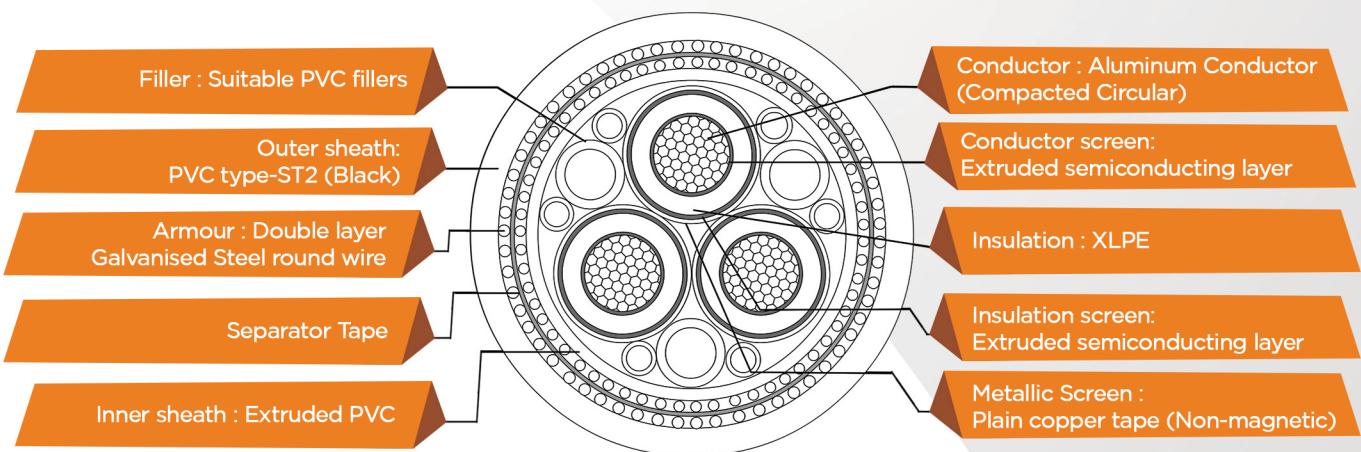
# MINING CABLE

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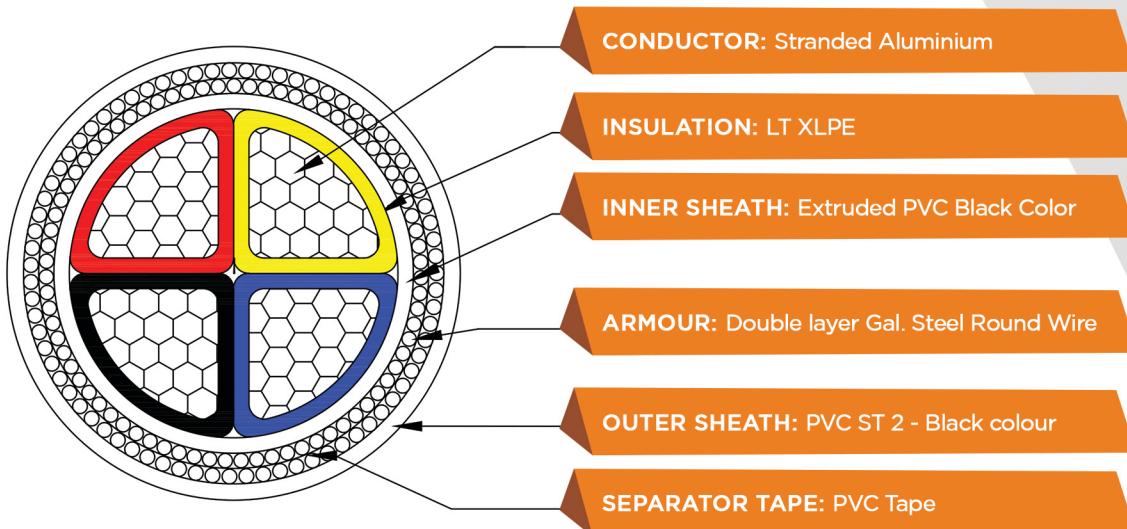
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- Designed to operate in harshest conditions , 1.1/ 3.3 kV voltage grade, Copper conductor.
- Double wire armoured to provide higher mechanical protection and flexibility. The conductivity of the armour is not less than 75% of the phase conductor.
- The cables are manufactured by GPIL as per IS: 1554 (Part 1) & IS: 7098 (Part 1 & 2) and as per customer requirement.



## LT MINING CABLE



# QUALITY ASSURANCE

Gupta power has a well-equipped laboratory to conduct all type of test including type test for LT & HT cable up to 66 kV.

We are also equipped to test Fire Survival Cable as per BS 7846, BS 6387 & BS 8491 for temperature up to 950 °C.

Cable can be tested as per following specification...

IS: 8130 - 1984

IS: 694 - 2010

IS: 1554(Part 1)  
1988

IS: 7098(Part 1)  
1988

IS: 7098(Part 2)  
1988

IS: 14255 — 1995

IS: 5831 — 1984

IS: 3975 - 1999

IS: 10810

IEC 60502-1 & 2

IEC 60754

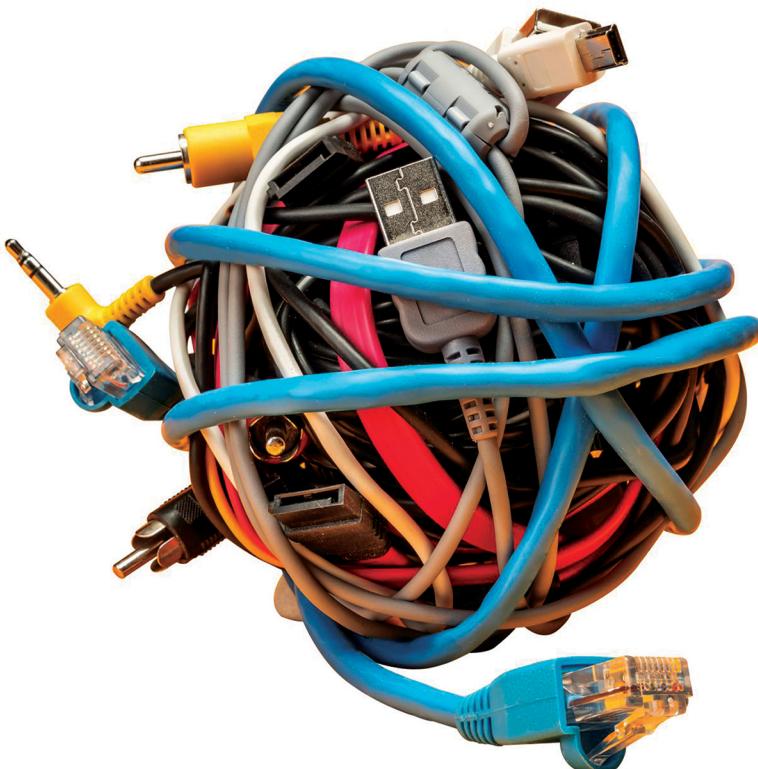
IEC 60332

IEC 60228

EN 50288-7



NABL Certified Labs



# PLANT VIEW

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PRESENTS  
**RHINO**

## KHURDA PLANT



## KASHIPUR PLANT



## CCV LINE



# RANGE OF PRODUCTS

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**RHINO**



## WIRES & CABLES



- Single Core Industrial Flexible Cables
- Multi Core Industrial Flexible Cables
- Co Axial TV Cables • Submersible Cables
- Telephone Switch Board Cables
- HT-LT Power Cables (66KV) • 1.1 KV LT XLPE
- PVC Power Cables • HT-LT Aerial Bunched Cables
- Instrumentation Cables • Control Cables
- Mining Cables • Thermocouple Cables
- Airfield Lighting Cables
- Railway Signalling Cables
- Other Specialised Cables
- Covered Conductors upto 33kV



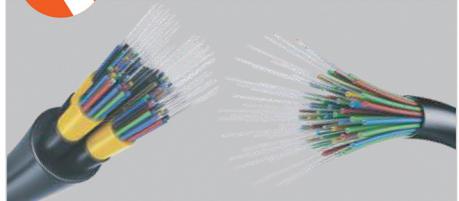
## LED LIGHTING



- Indoor Lighting
- Retail Lighting
- Warehouse Lighting
- Healthcare Lighting
- Outdoor Lighting
- Corporate Campus Lighting
- Façade Lighting
- Residential Lighting



## OPTICAL FIBER



- Duct Cables
- Armored Cables
- Cables with Glass Roving
- ADSS Cables
- Aerial Cables
- Hybrid Cables
- CATV Cables
- FTTH Cables
- Indoor Cables



## WIRES RODS



- Aluminium and Alloy as per AA-  
 • 1XXX • 5XXX • 6XXX • 8XXX



## SMART CONDUCTORS



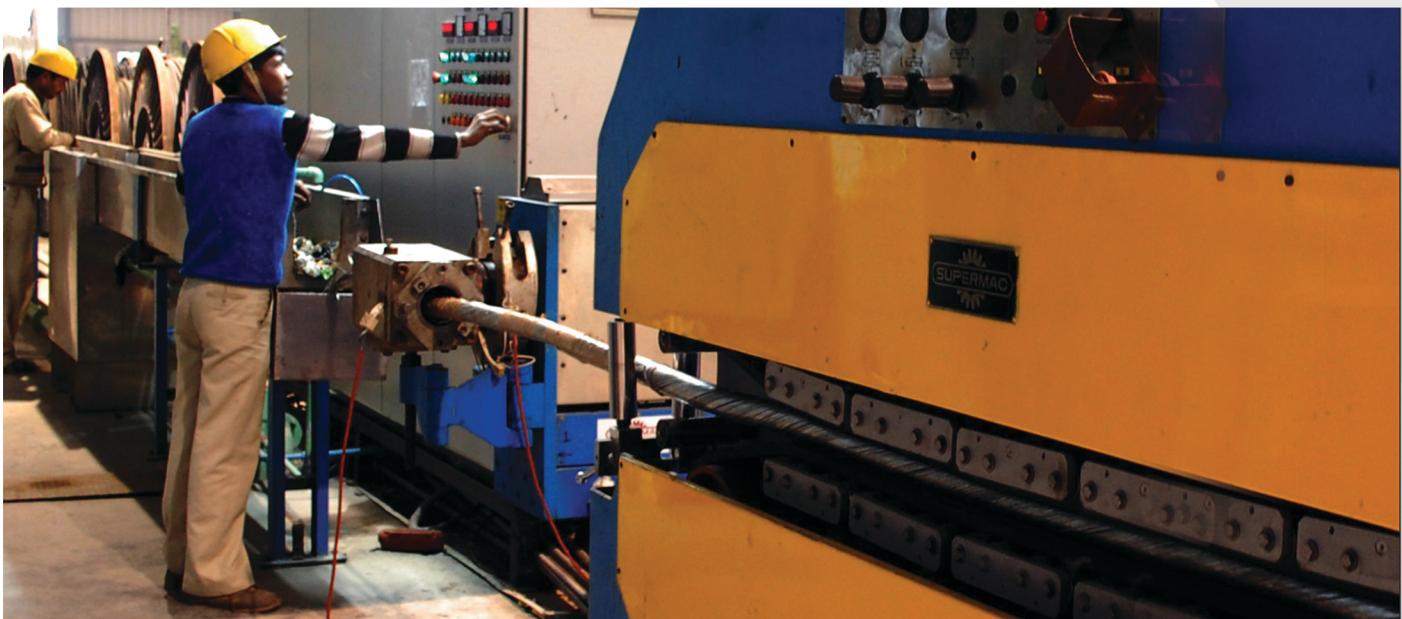
- AAC / AAAC / ACSR / ACAR
- HTLS (STACIR / ACSS / TACSR)
- Composite Core Conductors



## EPC DIVISION



- Survey • Design • Engineering
- Procurement • Construction
- Testing & Commissioning of Line & S/S Distribution & Transmission Class (LT, HT & EHT) both overhead and underground on Total Turnkey Basis.



## Gupta Power Infrastructure Limited

### Corporate Office

Cuttack Road, Bhubaneswar - 751006  
 Odisha, India  
 Phone: +91-674-2313898 / 2312945  
 Fax: +91-674-2312083  
 Email: info@guptapower.com,  
 rhino@guptapower.com

### International Business Division (Delhi)

907, 10th Floor, KM Trade Tower.  
 (Hotel Radisson Blu Complex),  
 Sector 14, Kaushambi, Ghaziabad - 201010  
 Email: ibd.delhi@guptapower.com,  
 exports@guptapower.com  
 Phone: +91 120-4104161

### Registered Office

EN 62, 7th Floor,  
 Sector - V, Salt Lake City,  
 Kolkata - 700 091.  
 Phone: 033-40657348  
 Email: kolkata@guptapower.com

### Research & Development Center

306, 3th Floor, KM Trade Tower.  
 (Hotel Radisson Blu Complex),  
 Sector 14, Kaushambi,  
 Ghaziabad - 201010  
 Email: rd.led@guptapower.com

### Marketing Office

907, 10th Floor, KM Trade Tower.  
 (Hotel Radisson Blu Complex),  
 Sector 14, Kaushambi,  
 Ghaziabad - 201010  
 Email: rd.led@guptapower.com

### Regional Office

#### Delhi Office

502, Sth Floor, KM Trade Tower,  
 Hotel Radisson Btu Complex,  
 Sector 14, Kaushambi,  
 Ghaziabad - 201010  
 Phone: +91-12-04224130

#### Lucknow Office

H-NO-01, Plat no-460,  
 Beghamau,  
 Gomti Nagar Extension Sector-06,  
 Near Mi Russel Apartment Saheed Path,  
 Lucknow-226010

#### Bhopal Office

Shed no. 27, Plot No -143-A,  
 Barnala Industries, Sector-H,  
 Govindpura Industrial Area, Bhopal,  
 Madhya Pradesh - 462023  
 Phone: 0755-4055631

#### Jaipur Office

B-4, Hotel Aarco Palace Complex  
 Vivek Nagar, Station Road,  
 L.M: Near Sindhi Camp Bus Stand  
 Jaipur-302006

#### Mumbai Office

204, Jaisingh business center, Sahar road,  
 Parsi wada, NR. Smashan bhumi,  
 Andheri (East), Mumbai - 400099  
 Email: prashant.gharat@guptapower.com

### Factory Address

#### Khurda Plant

Plot No. F/9,  
 IID Centre Khurda - 752054

#### Tamilnadu Plant A

D10/S1 Sipcot Industrial Complex  
 Gummidipoondi-601201  
 tn@guptapower.com

#### Tamilnadu Plant B

Shed No. 13 & 18, Phase V,  
 SIDCO Industrial Estate  
 Gummidipoondi - 601201  
 Email: tirupaticonductorstn@gmail.com

#### Uttarakhand Plant

Plot NO. 132,  
 Nandanagar Industrial Estate,  
 Phase II, Vill Mahakheraganj,  
 Kashipur - 244713

### Representative Offices

Meerut, Dehradun, Varanasi, Kanpur, Jaipur, Chandigarh, Amritsar, Kota, Ludhiana, Indore, Jabalpur, Pune, Goa, Baroda, Coimbatore, Salem, Madurai, Tirupati, Vizag, Hyderabad, Berhampur, Cuttack, Sambalpur, Midanapur, Jamshedpur

### Power Beyond Borders

