

# Comprehensive Cable Solutions



# **TORRENT GROUP**



The Torrent Group, founded by the late Shri U. N. Mehta in 1959 and currently led by Mr. Samir Mehta, is a driving force dedicated to transforming life.

Six decades ago, Shri U.N. Mehta embarked on a journey called Torrent for a simple cause and a unique sense of purpose: 'Happiness for All'. A medical representative with an exemplary vision, he ventured out independently by making niche marketing his core competency. And the rest, as they say, is history.

Today, the Torrent Group spreads care, hope, and happiness, empowers people, and lights up their lives.



Torrent Pharma, the flagship company of Torrent Group, is a leader in niche therapeutic segments, including cardiovascular, central nervous system and women's healthcare. With a presence in over 50 countries, Torrent Pharma holds the largest market share among Indian companies in Brazil and Germany.



Torrent Power is a leading brand in the Indian power sector, specializing in power generation, transmission, and distribution. The company has a generation capacity of approximately 5,000 MW, which includes both thermal and renewable energy sources. With an extensive network for transmission and distribution, Torrent Power operates efficiently across various regions. It serves over 4.5 million customers in its distribution areas, which include Gujarat, Maharashtra, and Uttar Pradesh.



Torrent Group is committed to transforming lives by meeting the essential needs of the community through its City Gas Distribution business. Operating in 17 geographical areas across 34 districts, Torrent Gas aims to promote socio-economic development by ensuring the widespread availability of natural gas. This initiative helps reduce pollution and offers substantial cost savings for consumers.



Torrent Electricals Limited embodies the Group's spirit of innovation. With over 3 decades of experience, we are a leading manufacturer of power cables and wires, catering to a diverse clientele across the private and public sectors. We offer a comprehensive range of wires and cables, from low-tension (LT) to extra-high voltage (EHV), constantly expanding our portfolio to include cutting-edge solutions like E-beam and specialty cables. Our 82-acre manufacturing facility is strategically located at Nadiad NH-8 Gujarat and is equipped with the latest technology.

## TORRENT ELECTRICALS LIMITED

With over 30 years of industry leadership, Torrent Electricals has been a trusted partner to private and public sectors, delivering a comprehensive range of high-performance cables since its establishment in 1989. Renowned for elevating customer expectations and setting new benchmarks in quality, Torrent Electricals continues to innovate and excel in the power cable industry.

Backed by Torrent Power's unparalleled expertise in transmission and distribution, Torrent Electricals ensures consistent and exceptional experiences for its clients. As a proud member of the Torrent Group, we uphold core values of excellence, innovation, and a commitment to transforming lives.

As the first cable manufacturer in India to achieve ISO 9001:2000 certification, Torrent Electricals has demonstrated an unwavering dedication to quality and adaptability, establishing itself as a symbol of trust and reliability. Our products consistently exceed customer expectations, solidifying our reputation as an industry leader.

Specializing in Extra-High-Voltage (EHV), High-Tension (HT) XLPE, and Low-Tension (LT) XLPE/PVC Power Cables, Control Cables, Housing Wires, and Flexible Multicore Cables, Torrent Electricals maintains rigorous testing protocols, including Routine, Type, Acceptance, and Special Tests, to guarantee unmatched safety and reliability.

Our products, designed with precision and robust construction, deliver exceptional performance with minimal defects and seamlessly function across diverse geographical conditions.

As we explore new opportunities beyond the power cable industry, we are excited about our strategic expansion into the Business-to-Consumer (B2C) segment. This move not only allows us to diversify our offerings but also reinforces our commitment to delivering reliable, safe, and innovative solutions across various fields. We aim to enhance the quality of life for our customers by providing products and services that prioritize their safety and satisfaction while identifying and embracing emerging trends in technology and design.

At Torrent Electricals, we believe that our growth is rooted in our ability to listen to our customers and adapt to their evolving preferences, ensuring that we remain at the forefront of delivering quality and value in every interaction.



# MANUFACTURING UNIT SPREAD OVER 82 ACRES



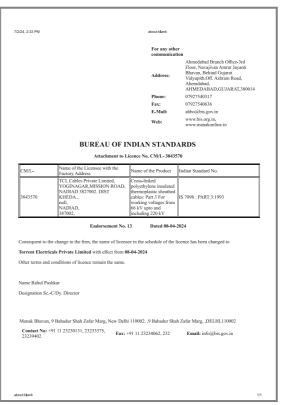


# **CERTIFICATIONS**











# **EHV CABLE CONSTRUCTION**



### **Wire Armoured**

- 1. Aluminum Conductor
- 2. Semiconducting Tape
- 3. Conductor Screen
- 4. XLPE Insulation
- 5. Insulation Screen
- 6. Semiconducting Water Swellable Tapes
- 7. Lapped Copper Wire Metallic Screening
- 8. Semiconducting Water Swellable Tape
- 9. Poly-Al-Poly Tape
- 10. Extruded HDPE Inner Sheath
- 11. Aluminum Round Wire
- 12. Plain Water Swellable Tape
- 13. Outer Sheath PVC (ST-2, FR, FRLS)/HDPE
- 14. Graphite Coating (Optional)



## Al. Corrugated

- 1. Aluminum Conductor
- 2. Semiconducting Tape
- 3. Conductor Screen
- 4. XLPE Insulation
- 5. Insulation Screen (Semiconducting Compound)
- 6. Plain Water Swellable Tape and Copper Woven Tape
- 7. Aluminum Corrugation
- 8. Anti Corrosive Bitumen Tape
- 9. Outer Sheath PVC (ST-2, FR, FRLS)/HDPE

## **EHV CABLES**



ALUMINIUM CORRUGATED SHEATH 66 kV



ALUMINIUM CORRUGATED SHEATH 110 kV



ALUMINIUM CORRUGATED SHEATH 132 kV



COPPER WIRE SCREEN POLY-AL-POLY SHEATH 66 kV



COPPER WIRE SCREEN POLY-AL-POLY SHEATH 110 kV



COPPER WIRE SCREEN POLY-AL-POLY SHEATH 132 kV

## **Special Features of EHV XLPE**

- Highly sophisticated triple extrusion CDCC (Completely Dry Cured and Cooled Curing) Process.
- · Unique CCV Line equipped EHT system for perfect concentricity.
- Computerized vulcanizing & cooling systems as well as extruder heating control system.
- In-line metal detectors for Semicon & XLPE materials which ensure removal of ferrous & non-ferrous metallic Impurities from compound before extrusion.
- In-line fine dust separator for XLPE insulation to have homogenous & extra clean insulation.
- Separate pressurized rooms for Semicon screening & XLPE insulation compound to avoid contamination.

#### **Specification & Features**

- Voltage range from 66 kV to 132 kV
- High current carrying capacity
- · High electrical performance
- Handle high operating temperature
- · Specialized EMI shielding
- · Good environmental protection
- Longer lifespan
- · Cost-effective
- Comply with IS-7098 Part-3

## **Application**

- · Grid interconnection
- Power plant
- Oil & Gas refineries
- Long-distance transmission
- Industrial zones
- · Chemical processing plant
- · Mining operation



## **HV CABLES**



1C MEDIUM VOLTAGE COPPER POWER CABLES



3C MEDIUM VOLTAGE ALUMINIUM POWER CABLES



3C MEDIUM VOLTAGE COPPER POWER CABLES



3C MEDIUM VOLTAGE POWER CABLES WITH WIRE ARMOURED

## **Salient Features of HV Cables**

- High-Voltage insulation: HV cables feature specialized insulation materials that can withstand the high voltages and electrical stresses associated with transmission at these levels.
- Thermoplastic or XLPE insulation: These materials offer excellent dielectric strength, mechanical strength and resistance to aging.
- Copper or Aluminum conductors: HV cables use high-conductivity materials to minimize electrical resistance and reduce energy losses.
- Specialized cable design: HV cables are designed to withstand the mechanical stresses associated with installation, operation and maintenance, including flexural fatigue and thermal cycling.
- Insulation shields and screens: These add an extra layer of protection against electromagnetic interference (EMI) and radio-frequency interference (RFI).

#### **Specification & Features**

- · Core: Single Core & Multicore
- Rated Voltage: 3.3 kV (E), 3.3 kV (UE),
   6.6 kV (E), 6.6 kV (UE), 11 kV (E),
   11 kV (UE), 22 kV (E), 33 kV (E), 33 kV (UE)
- Dimension:
  - 1. Single Core 1C X 50 sq. mm. to 1C X 1000 sq. mm
  - 2. Multi Core 3C X 50 sq. mm. to 3C X 400 sq. mm
- Comply with IS-7098 Part-2

## **Application**

- Power Transmission and Distribution networks
- Industrial power supply
- Distribution substation
- · Renewable energy system

# **HV CABLE CONSTRUCTION**



## **Single Core Aluminium**

- 1. Aluminum Conductor
- 2. XLPE Insulation
- 3. Semi Conductive Conductor Screen
- 4. Insulation Screen
- 5. Copper Tape
- 6. PVC/HDPE Inner Sheath
- 7. Aluminum/GI Round Wire
- 8. Outer Sheath PVC (ST-2, FR, FRLS)/HDPE



## **Three Core Aluminium**

- 1. Aluminium Conductor
- 2. Conductor Screen
- 3. XLPE Insulation
- 4. Insulation Screen (Triple Extrusion)
- 5. Wrapped Copper Tape (Metallic Screen)
- 6. PVC Fillers
- 7. Extruded PVC/HDPE Inner Sheath
- 8. Galvanized Steel Flat Strip
- 9. Outer Sheath PVC (ST-2, FR, FRLS)/HDPE

# LV CABLE CONSTRUCTION



## **LV Power Cables**

- 1. Aluminium Conductor
- 2. PVC Insulation
- 3. PVC Inner Sheath (Extruded/Tape Wrapped)
- 4. Armour
- 5. PVC Outer Sheath



## **LV Control Cables**

- 1. Stranded or Solid Copper Conductor
- 2. Insulation
- 3. Inner Sheath (Bedding)
- 4. Armouring
- 5. PVC Outer Sheath



# LV CABLES

















## **Special Features of LV Cables**

- Voltage rating up to 1.1 kV
- · Flexible and Durable
- · Low Smoke and Halogen free options
- · Comply With IS-7098, Part -1 & BIS 1554 Part-1

## **Specification & Features**

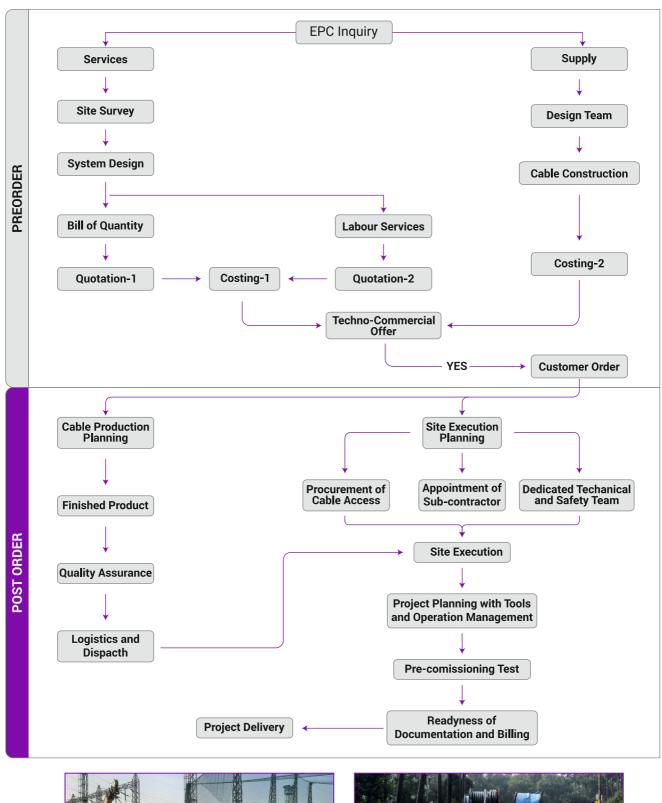
- Conductor: Aluminum/Copper
- Core: Single core & Multicore
- Insulation: PVC, XLPE
- Armour: GI wire/strip, Aluminum wire

## **Application**

- Power distribution in industries & buildings
- Residential
- · Security system
- Control Panel
- Instrumentation circuits
- · Renewable energy system



# **TURNKEY SOLUTIONS**







# PROJECT MANAGEMENT LIFE CYCLE

## Looking for a trusted partner to execute your electrical projects?

 At Torrent Electricals Limited we offer Turnkey Solutions up to 132 kV for Industries, Utilities, Independent Power Producers, Renewable Energy Projects.

#### What do we offer?

- Design and engineering of transmission/power distribution systems, including power distribution.
- Supply and installation of electrical equipment.
- · Commissioning, testing and certification as per scope.

## The "win-win" proposal highlights the benefits of partnering with Torrent Electricals Limited.

## The proposal consists of four sections

- · Reducing Project Delay
- Increasing Efficiency
- Cost Optimization
- Trusted Customer Service

### We make it simple and transparent, step-by-step

- Route Survey: Identifying the best route and obtaining necessary permissions.
- Cable System Design: Designing the cable system with specified materials and ensuring compliance.
- Construction for Cable Trench: Excavating trenches, considering terrain, soil conditions and environmental concerns
- · Cable Laying: Laying cables in trenches, ensuring proper alignment, security and protection.
- Termination: Terminating cables at substations and other termination points.
- Testing & Commissioning: Testing the cable system to ensure compliance and commissioning the system once successful.

#### And there is more to offer, we also execute

- Conversion of existing overhead lines to underground cable laying network.
- Loop-in Loop-out (LILO): The project involves connecting existing EHV (Extra High Voltage) substations to
  a new underground cable network, which requires careful planning and execution to ensure that the
  substations are not affected by the change.
- Load Growth Schemes: The project aims to accommodate future load growth by designing and installing a system that can handle increased power demand over time.

#### Plan-execute and achieve

- Torrent Electricals Limited underlines the importance of project schedules to ensure timely completion of project deliverables.
- We implement Project management methodologies and tools, including the Critical Path Method, to achieve realistic timelines and ensure consistent delivery schedule.

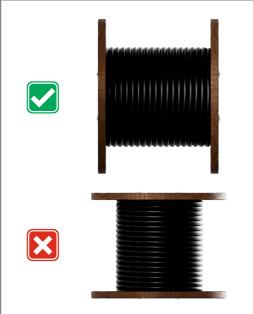
#### **Testing and certification**

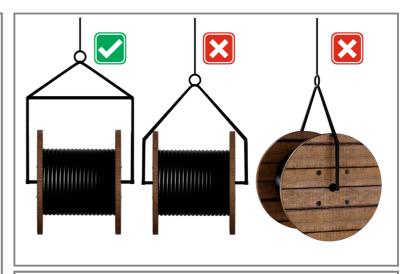
- Visual and mechanical inspections to ensure safety and functionality.
- · Electrical tests to identify potential issues, if any.
- Testing performed in the presence of a customer representative for transparency and accountability.
- Issuance of a completion certificate/report outlining scope of work, testing results and deviations.
- Certification process ensures compliance with scope, specifications and regulations.
- Documentation provides a formal record of the project's status and serves as a basis for future maintenance, upgrades, modifications and sign-off.

### The last mile

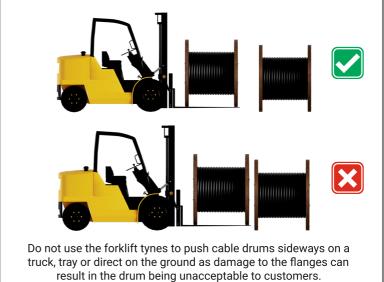
• After performing all required Tests, the team hands over the completed project to the customer, providing essential documents, including drawings, operation manuals, user guides and warranty information.

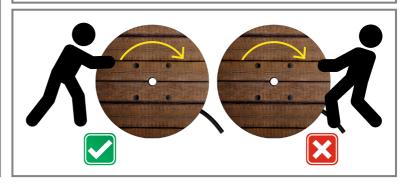
# **DRUM HANDLING**











When storing cable drums for long periods, please take the following guidelines into consideration:

- ✓ The drums must always be stored with their flanges vertical.
- ✓ Leave enough space between stored drums for air circulation.
- The bolts should be tightened at regular intervals.



# **INDUSTRIES & CUSTOMERS WE CATER TO**

## **GOVERNMENT AND SEMI-GOVERNMENT COMPANIES**











































## **PRIVATE SECTOR**































































## **BRANCH OFFICES**

### **MUMBAI**

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#### **HYDERABAD**

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