Trusted Supplier for Underground Infrastructure Projects

Power Cable Protection Solutions

"Reliable conduit systems for power, telecom and infrastructure projects."

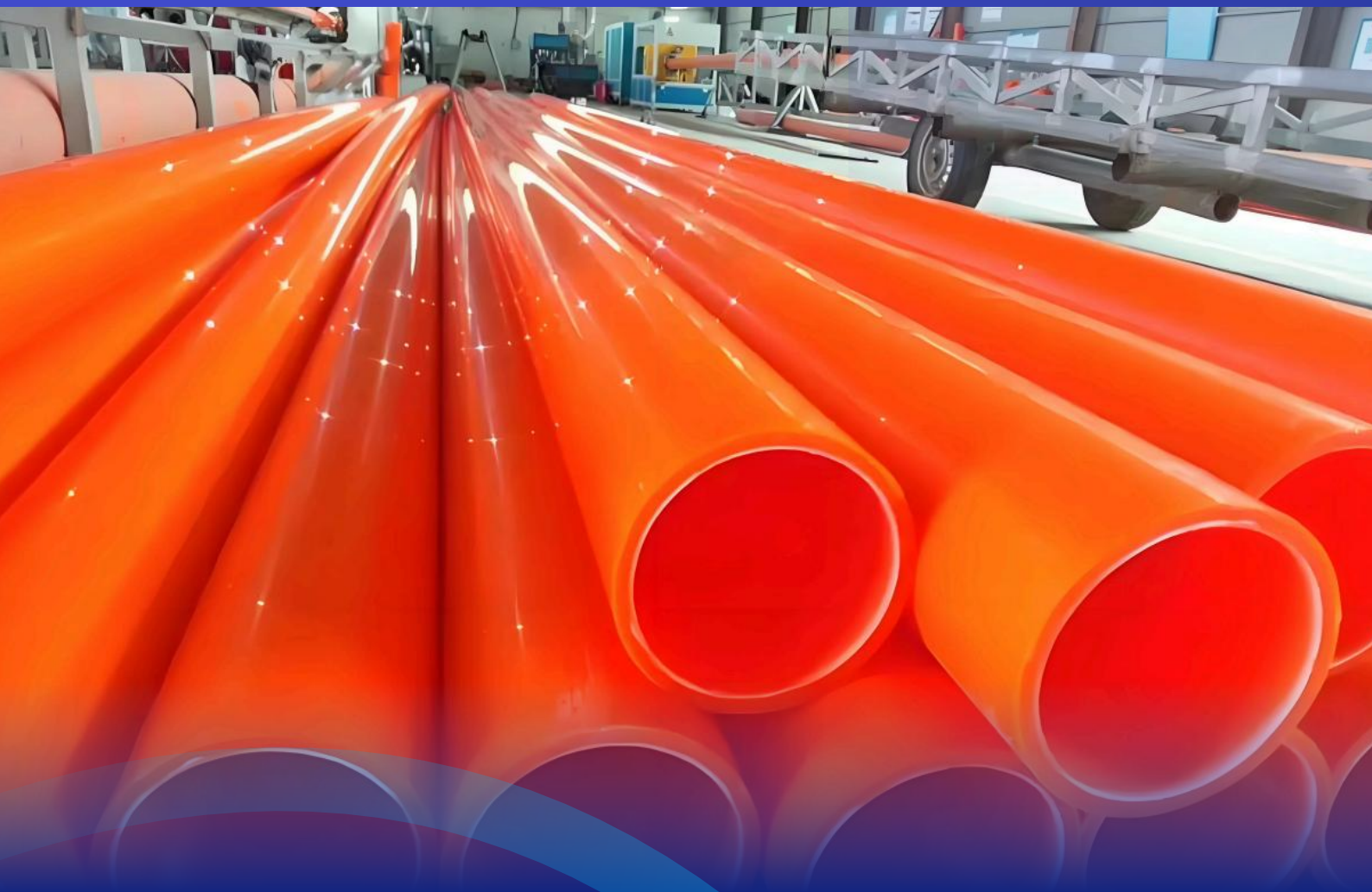
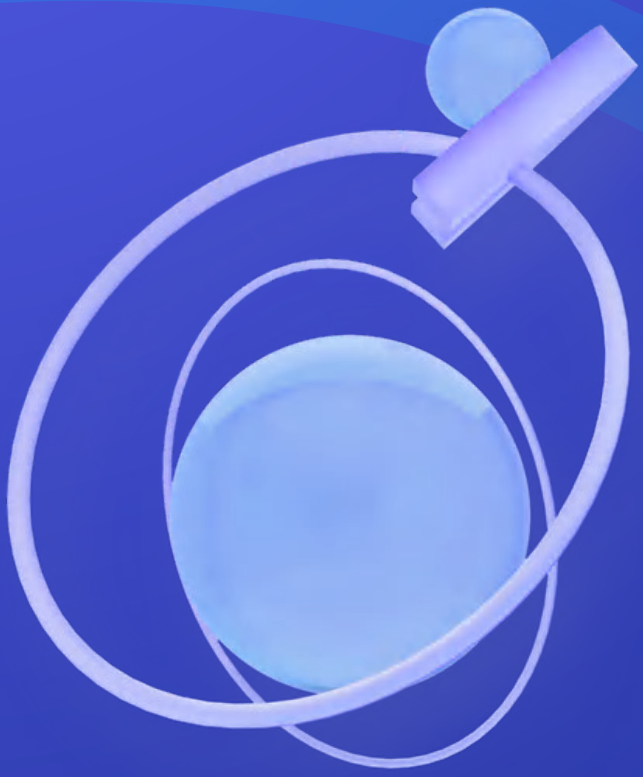


Table of Contents



01 Introduction

About RIVOPIPE

RIVOPIPE is a supplier of power cable protection pipes and electrical conduit systems for underground infrastructure projects. We work with a manufacturing partner with over 25 years of experience, providing stable production, consistent quality, and reliable delivery for global customers.

Our products are designed for real engineering applications, offering strong mechanical performance, smooth installation, and long service life. With large diameter capacity up to 254mm and flexible customization, we support contractors and distributors in power, solar, telecom, and municipal projects.

We focus on practical solutions rather than just products. From quotation to delivery, we provide efficient communication, stable production, and project-oriented support. If specific standards or certifications are required, we can also assist with customized testing and certification based on local project requirements.

1.1 Manufacturing Background

RIVOPIPE works with a qualified manufacturing facility with over 25 years of experience in plastic pipe production. The factory integrates production, processing, and sales, with a daily output of up to 20,000 meters, ensuring stable quality and reliable supply for infrastructure projects.

25+ years of manufacturing experience in plastic pipe production

ISO-certified system with CNAS-supported testing

Daily output up to 20,000 meters for project supply

With a strong manufacturing foundation and standardized production processes, we ensure consistent product quality, reliable performance, and stable supply for infrastructure and utility projects.

1.2 Production Capacity

Our manufacturing process is designed to meet the following key requirements:

01

Efficient Production Scheduling

Supporting project timelines with well-organized production planning

02

Stable Supply Capacity

Multiple production lines ensuring continuous and reliable output

03

Reliable Lead Time

Consistent delivery performance for bulk and urgent orders

1.3 Quality Control

Full-process quality control ensures consistent performance and reliable product quality.

01

Using virgin raw materials from trusted suppliers such as Sinopec

02

Raw materials can be tested before production

03

Strict quality control during the production process

04

Finished products can be tested before shipme

1.4 Product Capability

Suitable for both conventional trenching and trenchless installation methods such as HDD:

- Wide Size Range Available in various sizes up to 254mm
- Strong resistance for underground use
- Suitable for trenching and trenchless methods

Engineered for stable performance in both standard and complex underground installations.

02
Why Choose Us

2.1 Reliable Manufacturing

Experience

Strengthening Operational Excellence for the Technical Division

System

Mature and stable production system

Integration

Complete process from raw materials to finished products

Standardization

Controlled processes ensuring consistent quality

Capacity

Strong output to support large-scale project supply

2.2 Reliable Quality

Delivering consistent, durable, and reliable performance to reduce project risk and ensure long-term protection.

Aspect	Description
Consistency	Stable performance across every batch
Durability	Long service life in underground use
Safety	Reliable protection for power cables
Verification	Testing available before delivery
Confidence	Reducing risk for project execution

2.3 Stable Supply

Ensuring stable supply and reliable delivery for project and bulk orders.

Scheduling

Efficient planning to match project timelines

Capacity

Strong production capacity for continuous supply

Lead Time

Reliable delivery for bulk and urgent orders

Flexibility

Quick response to changing project demands

2.4 Project Support

Providing responsive support to help projects run smoothly and efficiently.

Fast Response	**Fast Response** Responding within 12 hours for inquiries	**Clear Communication** Simple and efficient project discussion process
Project Support	**Project Support** Helping select suitable conduit specifications	**Technical Support** Supporting installation and application requirements
Flexible Cooperation	**Custom Options** Sizes and specifications based on project needs	**Certification Support** Assisting with required local certifications

2.5 Typical Applications

Power Networks

Underground cable protection for power transmission and distribution projects

Solar Projects

Cable routing and protection in solar energy installations

Telecom Systems

Safe protection for communication and fiber optic cables

Municipal Infrastructure

Used in urban underground utility and infrastructure systems

Providing dependable cable protection solutions for diverse infrastructure applications.

03
Key Benefits

Key Benefits

01

Easy installation, saving labor time

02

Durable quality, reducing replacement cost

03

Reliable protection for power and solar cables

04

Suitable for hot and complex environments

These outcomes are achieved through stable product performance, consistent quality control, and practical design focused on real project needs. Our conduit systems are built to support efficient installation while maintaining long-term reliability in underground environments.

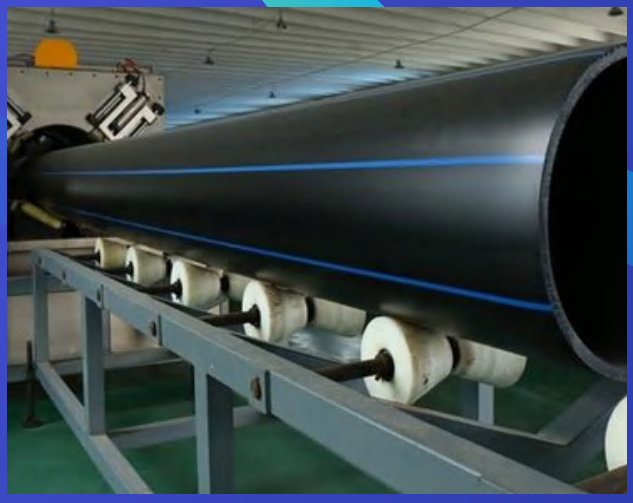
With reliable supply capacity and flexible support, we help contractors and distributors reduce risks and improve project efficiency. Whether for power, solar, or infrastructure applications, our solutions are designed to deliver dependable performance where it matters most.

Our conduit solutions include MPP and PE systems, providing reliable options for different underground installation conditions. Designed for durability and easy installation, they are widely used in power, solar, telecom, and municipal projects.

3.1 Product Advantages

Category	MPP Conduit	PE Conduit
Material	Modified Polypropylene	High-Density Polyethylene
Diameter Range	Up to 254mm	Up to 254mm
Installation	Trenching & trenchless (HDD)	Mainly trenching installation
Application	Power cable protection	Power & telecom cable protection
Key Feature	High strength & impact resistance	Flexible and cost-effective
Color Options	Custom colors available	Custom colors available

RIVOPIPE provides high-performance MPP conduits (For Power & Trenchless HDD Applications) and durable PE solutions (For Universal, Water Supply & Telecom Applications) with the following technical specifications.



Technical Specifications

Parameter	MPP Conduit	PE Pipe
Primary Use	For Power & Trenchless (HDD)	Universal, Water & Telecom
Diameter (OD)	50mm – 254mm +1	20mm – 254mm +1
Wall Thickness	4.0mm – 15.0mm (SDR11/13.5)	2.0mm – 20.0mm (PN10/PN16)
Standard Length	6m / 9m / 12m (Customizable)	6m / 9m / 50m-100m Coils
Heat Resistance	Vicat 154°C (High-Heat)	60°C – 95°C (Standard)
Inner Surface	0.27 Friction (Ultra-Smooth)	0.30 – 0.35 Friction

3.3 Attendance Summary

Easy Installation
Smooth inner surface reduces friction and saves labor time

High Durability
Strong resistance ensures long service life underground

Cost Efficiency
Reducing installation and maintenance costs

Our conduit systems are designed to meet real project requirements, combining strength, durability, and installation efficiency. They help contractors and distributors improve performance, reduce costs, and ensure long-term reliability in underground applications.

Production Line and Facility Overview

A reliable manufacturing environment ensuring consistent quality and stable production capacity.

04 Product Overview

Our conduit systems are designed to meet different underground cable protection requirements, offering both high-performance and cost-effective solutions for infrastructure projects.

4.1 MPP Conduits: The Gold Standard for Trenchless Power Projects

Key Features of MPP Conduits

Key Features	Detailed Description
High Thermal Stability	Heat distortion temperature ≥ 93°C. Ideal for cables that generate significant heat during operation.
Trenchless Excellence	High tensile strength and flexibility (bending radius 8-10x diameter), perfect for horizontal directional drilling (HDD).
Long-Term Reliability	50+ years service life with zero corrosion and superior electrical insulation (no eddy currents).
Eco-Friendly	100% recyclable material, meeting modern green infrastructure standards.

*Parameters based on SGCC (State Grid Corporation of China) technical standards.

MPP (Modified Polypropylene) is specifically engineered for high-voltage cable protection where traditional pipes fail under heat or tension.

Why Choose MPP Over Traditional Materials?

Comparison of Power Cable Conduits

(Comparison based on industry standards and RIVOPIPE laboratory data)

Technical Property	MPP Conduit	CPVC Conduit	UPVC Conduit
Material Composition	Modified Polypropylene (MPP)	Chlorinated Polyvinyl Chloride	Polyvinyl Chloride
Installation Method	Trenchless (HDD) & Trenching	Trenching Only	Trenching Only
Vicat Softening Temp.	154°C (Superior)	90°C - 105°C	60°C - 70°C
Tensile Strength	High (Heavy Duty)	Medium	Low
Impact Resistance	Excellent (High Elasticity)	Brittle at low temps	Average
Eco-Friendliness	Green / Recyclable	Contains Chlorine	Contains Chlorine
Service Life	50+ Years	30 - 50 Years	20 - 30 Years

Note: RIVOPIPE MPP is specifically optimized for high-voltage power grids requiring maximum thermal stability and mechanical tension.

4.2 Selection Insights

While traditional HDPE and PVC pipes are common, they often fail in high-spec engineering. MPP (Modified Polypropylene) is specifically engineered to bridge the gap between "cost" and "extreme performance," offering a 50-year maintenance-free solution for critical underground infrastructure.

- Maintained rigid structure at 93°C+ to prevent cable collapse, far exceeding standard HDPE (40°C).
- Delivered superior tensile strength to withstand high-stress pulling without snapping or deforming.
- Provided 100% electrical insulation and 50+ years of service life in harsh soil environments.

Minimized total project installation costs

Reduced labor and transportation costs by 30% compared to heavy steel or cement conduits.

4.3 Why Choose RIVOPIPE MPP?

MPP (Modified Polypropylene) is the premium engineering standard designed to solve the two biggest headaches in underground power projects: **High Heat and Trenchless Tension.**

RIVO PIPE Verified as a trusted SGCC technical supplier
Delivered high-standard conduits to the State Grid Corporation of China, ensuring grid-level reliability.

Certified by international quality authorities

Obtained ISO 9001 and CE certifications, meeting global safety and manufacturing excellence standards.

4.4 What Our Clients Say

Join 100+ global distributors in delivering SGCC-standard reliability.
Partner with RIVOPIPE to secure your next high-margin power project.

“We used RIVOPIPE MPP for a major 33kV trenchless project. The tensile strength during the HDD pulling was impressive—not a single crack. It saved us weeks of excavation time”.

Standardized for 33kV Underground Projects in West Africa.

"Heat dissipation is our main concern for underground cables. RIVOPIPE's 93°C thermal stability gives us peace of mind that the infrastructure will remain stable for decades."

Senior Project Engineer, Leading Utility Company in Kenya

05 Technical Performance

RIVOPIPE MPP conduits are tested under the most rigorous conditions. Our latest CNAS-accredited reports confirm that our products exceed national safety standards, ensuring heat dissipation and structural integrity for high-voltage underground networks.

5.1 Technical Specifications

Test Item	Requirement	RIVOPIPE (Result)
Vicat Softening Temp	≥ 150 ℃	154 ℃
Friction Coefficient	≤ 0.35	0.27
Flexural Strength	--	39.2 MPa
Longitudinal Reversion	≤ 3 %	1 %
Heat Dissipation	≤ 30 ℃	Pass (25 ℃)
Color & Appearance	Orange	Uniform / Smooth

***All data extracted from CNAS Certified Report No. JS2025TD0228**

Production Capacity: Daily output 20,000+ meters.

Industry Status: Strategic Supplier for SGCC (State Grid Corporation of China).

5.2 Production Capacity

High-Scale Manufacturing Base

- 20,000+ Meters Daily Output: Ensuring stable supply for bulk orders and urgent.
- 25+ Years Expertise: Deep industry knowledge in power cable protection and plastic piping systems.
- 15-Acre Production Zone: Modernized facility with advanced high-speed extrusion

5.3 Strategic Status

Trusted by National Giants:

> RIVOPIPE is a Qualified Supplier for the State Grid Corporation of China (SGCC). Our products are pre-approved for national-level power distribution and underground utility tunnels, meeting the strictest safety codes in the world's largest power network.

This national-level endorsement is your ultimate guarantee of quality, bringing China's leading power grid standards to your local infrastructure projects.

Globally Recognized Standards


证书覆盖范围： 塑料管材的加工（需资质许可产品除外）

颁 证 日 期： 2023 年 06 月 30 日 证书有效期至： 2026 年 06 月 29 日

初次颁证日期： 2023 年 06 月 30 日

本证书颁发后，3年有效期内每年必接受2次监督审核，证书及时有效性可通过网站查询www.lajcc.cn

本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）或扫描右下角的二维码查询。

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C217-M

李念国 Signed By Li Nianguo

山东利安捷国际认证服务有限公司

Original Chinese documents available for verification upon request.


14001

环境管理体系认证证书

证书编号：55824E0297R0S

兹证明：

济南硕达管业有限公司

统一社会信用代码/组织机构代码：91370181MA3F4L3203

环境管理体系符合：

GB/T 24001-2016 /ISO14001:2015

证书覆盖范围：

塑料管材的销售及相关的环境管理活动


45001

职业健康安全管理体系认证证书

证书编号：55824S0293R0S

兹证明：

济南硕达管业有限公司

统一社会信用代码/组织机构代码：91370181MA3F4L3203

职业健康安全管理体系符合：

GB/T 45001-2020/ISO45001:2018

证书覆盖范围：

塑料管材的销售及相关的职业健康安全管理活动

06
Typical Applications

RIVOPIPE provides specialized solutions for every environment: Use our high-strength MPP for heat-sensitive power grids and trenchless (HDD) telecom projects, or choose our low-friction PE for standard water and fiber optic installations

6.1 Application Solutions: MPP & PE Conduit Systems

01

High-Voltage Power Protection (MPP Focus)

Designed for urban grids and high-voltage cables. With Vicat 154°C heat resistance, RIVOPIPE MPP ensures no deformation under high thermal loads, making it the premier choice for Trenchless (HDD) installation.

02

Water Supply & Drainage (PE Focus)

Utilizing high-density PE solutions for municipal water and sewage. These pipes offer 50+ years of service life with excellent corrosion resistance and flexibility for complex terrains.

03

Telecom & Fiber Systems

- Engineering Focus: 5G base stations and fiber optic backbones.
- RIVOPIPE Advantage: The ultra-smooth inner wall (Friction Coefficient 0.27) allows for faster cable pulling over longer distances without damaging sensitive fiber jackets.

6.2 Application Standards: MPP vs. PE Conduit Systems

Application Field	Recommended Pipe	Key Technical Advantage
High-Voltage Power Grid	MPP Conduit	Vicat 154°C: High heat resistance to prevent cable melting.
Trenchless (HDD) Projects	MPP Conduit	Superior Tension: High tensile strength for directional drilling.
Solar & Wind Farms	MPP / PE	Corrosion Proof: Resistant to environmental & chemical stress.
Potable Water / Sewage	PE Pipe	Safety & Life: Non-toxic material with 50+ years service life.
Telecom (General)	PE Conduit	Low Friction (0.27): Ultra-smooth wall for easy fiber blowing.

From high-heat power grids to trenchless HDD telecom, RIVOPIPE MPP and PE systems deliver the certified 154°C thermal stability and 0.27 low-friction your infrastructure demands.

RIVOPIPE: Engineering the Future of Underground Power & Telecom.

RIVO Pipe
WhatsApp Business Account

MPP & PE Solutions
Jinan High-tech Zone, Shandong Province, China. 250101
+8618963081995

www.rivopipe.com
sales@rivopipe.com
@rivopipe

This document is the official technical catalog of RIVOPIPE. All product specifications and technical data are subject to our final confirmation. For project inquiries, bulk pricing, or technical support, please contact our International Trade Division at info@rivopipe.com.

Mar 14, 2026