

Pipe Jacking Machine Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented, By Type (Soft Rock Pipe Jacking Machine, Slurry Balance Pipe Jacking Machine, Others), By Application (New Sewerage & Drainage Construction, Gas & Water Mains, Oil Pipelines, Road Underpasses, Bridge Abutments), By Region, By Competition, 2020-2030F

<https://marketpublishers.com/r/P86291FD96F6EN.html>

Date: September 2025

Pages: 180

Price: US\$ 4,500.00 (Single User License)

ID: P86291FD96F6EN

Abstracts

Market Overview

The Pipe Jacking Machine Market was valued at USD 10.31 Billion in 2024 and is expected to reach USD 14.56 Billion by 2030 with a CAGR of 5.76%. The pipe jacking machine market refers to the global industry surrounding the design, manufacturing, sales, and deployment of advanced machinery used for trenchless underground pipeline installation. Pipe jacking machines are specialized equipment that enable the precise, efficient, and environmentally friendly placement of pipelines without the need for extensive surface excavation, making them critical for modern infrastructure development in urban and environmentally sensitive areas.

This market encompasses a wide range of machine types and supporting technologies designed to install pipelines for water supply, sewage, drainage, oil and gas, telecommunications, and utility networks. Unlike traditional open-cut methods, pipe jacking technology allows for the installation of pipelines beneath highways, railways, rivers, and densely populated urban areas with minimal surface disruption, reduced environmental impact, and lower long-term costs. The market integrates a diverse

ecosystem of stakeholders including machine manufacturers, construction companies, engineering firms, component suppliers, and service providers, all working together to advance trenchless technology solutions.

Driven by rapid urbanization, rising investment in underground utility networks, and the increasing demand for sustainable construction methods, the pipe jacking machine market is expanding significantly. The machines themselves incorporate cutting-edge technologies such as advanced guidance systems, laser alignment, high-powered hydraulic jacks, and automation features that improve accuracy, safety, and productivity in underground construction projects. Key end users include municipal authorities, utility operators, and private construction firms, with growing applications across water and wastewater management, oil and gas pipelines, electricity and telecom conduits, and stormwater drainage systems.

Key Market Drivers

Rising Demand for Underground Infrastructure Development

The increasing demand for underground infrastructure development is a major driver for the growth of the pipe jacking machine market, as governments, municipalities, and private developers are actively seeking efficient solutions to address urbanization, population growth, and expanding industrial activity.

With cities becoming more congested and land availability on the surface shrinking, there is a pressing need to move essential utilities and transport systems underground to maximize space utilization and improve overall urban planning. Pipe jacking machines play a critical role in the construction of underground pipelines, sewers, subways, and utility tunnels, enabling projects to be executed with minimal disruption to surface activities such as traffic, businesses, and residential communities.

This non-disruptive construction method is particularly important in densely populated urban centers where traditional open-cut trenching methods are impractical or too costly due to the relocation of existing utilities, environmental restoration, and surface infrastructure repair. Moreover, the rising emphasis on smart cities and sustainable infrastructure is further accelerating the deployment of underground networks for water supply, wastewater management, telecommunications, and power distribution, as these systems need to be reliable, durable, and environmentally compliant.

Pipe jacking machines provide the necessary precision and efficiency to handle varying

soil conditions, large-diameter tunneling, and long-distance underground installations, making them indispensable in modern infrastructure projects. Additionally, the increasing investments in metro rail networks, cross-city sewer systems, underground power cabling, and district cooling systems are creating sustained demand for advanced tunneling technologies. Governments are also prioritizing eco-friendly construction techniques, and pipe jacking offers an environmentally favorable approach by reducing carbon emissions, land excavation, and material wastage. Over 60% of global urban populations are expected to live in megacities by 2030, boosting underground infrastructure needs. Around 70% of new metro and subway projects worldwide involve underground construction to optimize space and reduce congestion. Nearly 40 million kilometers of underground utilities (pipelines, cables, tunnels) are projected to be laid globally by 2035. By 2030, underground transportation networks are estimated to support more than 500 million daily commuters across major global cities. Over 50% of global smart city projects include underground infrastructure for utilities, mobility, and resilient energy systems.

Key Market Challenges

High Capital Investment and Operational Costs

The pipe jacking machine market faces a significant challenge in the form of high capital investment and operational costs, which continue to limit widespread adoption, particularly among small and medium-sized contractors. Pipe jacking technology, while highly effective for trenchless construction and underground infrastructure projects, requires substantial upfront investment in specialized machinery, auxiliary equipment, and technical expertise. The cost of a single pipe jacking machine can be prohibitively high, compounded by the need for support systems such as slurry management, guidance control, and maintenance facilities, creating barriers for new market entrants and smaller operators.

Furthermore, the operational costs associated with these machines are considerable, as they demand skilled operators, specialized maintenance personnel, and regular servicing to ensure efficiency and safety. Downtime due to equipment malfunction or improper handling can result in severe project delays, leading to additional financial losses. In addition, procurement of spare parts and components, often from limited or international suppliers, can increase expenses and lengthen repair cycles, especially in developing regions where local availability is scarce.

The requirement for continuous technical training further adds to operational costs, as

companies must invest in keeping their workforce updated on advanced machine functionalities, safety protocols, and compliance standards. These cost factors also restrict flexibility for contractors when bidding for infrastructure projects, as pricing competitiveness may be undermined by higher overheads compared to traditional excavation methods.

Governments and municipalities, while recognizing the long-term benefits of trenchless technology, often face budget constraints that limit their ability to fund projects requiring high-end pipe jacking machines, creating a gap between demand for modern infrastructure solutions and the financial resources available to execute them.

The challenge is exacerbated in emerging economies where infrastructure expansion is needed most, but capital intensity hampers adoption, causing reliance on outdated construction techniques. As sustainability and environmental concerns push for reduced surface disruption and eco-friendly construction methods, the economic barrier posed by high investment and operational costs remains a major hurdle, preventing faster scaling of pipe jacking technology across diverse markets.

Unless financing models, equipment leasing options, or government incentives are introduced to lower this cost burden, the high financial entry threshold will continue to slow down adoption and limit growth opportunities within the global pipe jacking machine market.

Key Market Trends

Rising Demand for Urban Infrastructure and Underground Utility Development

The global pipe jacking machine market is witnessing a significant trend driven by the escalating demand for urban infrastructure expansion and underground utility development, as cities worldwide grapple with rapid urbanization and the need to modernize their utility systems. Governments and municipal authorities are increasingly prioritizing underground infrastructure projects such as water supply networks, sewage systems, gas pipelines, and telecommunications conduits to address space constraints, environmental concerns, and growing population densities in metropolitan regions.

Traditional excavation techniques are often disruptive, time-intensive, and environmentally unsustainable, whereas pipe jacking machines offer a trenchless solution that minimizes surface disturbances, reduces project timelines, and enhances cost efficiency over the long term. The demand is particularly strong in megacities,

where existing infrastructure is aging and requires replacement or augmentation without major disruptions to daily urban activities. Moreover, smart city initiatives are fueling the need for technologically advanced underground systems that integrate digital connectivity, renewable energy conduits, and resilient water management networks, all of which require precise and reliable tunneling solutions that pipe jacking machines can provide.

Countries in Asia Pacific and the Middle East, in particular, are experiencing rapid growth in infrastructure investment programs, further strengthening the adoption of trenchless technologies. The integration of pipe jacking methods with digital planning and modeling tools is enabling better project design and execution, providing engineers with enhanced capabilities to plan complex underground networks with accuracy and reduced risks. Additionally, public awareness of sustainable development practices is pushing policymakers to support methods that reduce the carbon footprint of construction projects, and pipe jacking machines align with these objectives by lowering emissions and environmental impact compared to open-cut excavation.

The convergence of rising infrastructure demands, sustainability goals, and technological advancements has positioned pipe jacking machines as a critical enabler of modern underground development. This growing adoption is likely to intensify as urban populations continue to surge, infrastructure needs multiply, and governments accelerate investments in resilient underground systems to future-proof cities against environmental and population pressures.

Key Market Players

Herrenknecht AG

Akkerman Inc.

The Robbins Company

Terratec Ltd.

Iseki Poly-Tech, Inc.

China Railway Construction Heavy Industry Corporation Limited (CRCHI)

MTS Perforator GmbH

SELI Overseas S.p.A.

RASA Industries, Ltd.

Vermeer Corporation

Report Scope:

In this report, the Global Pipe Jacking Machine Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Pipe Jacking Machine Market, By Type:

Soft Rock Pipe Jacking Machine

Slurry Balance Pipe Jacking Machine

Others

Pipe Jacking Machine Market, By Application:

New Sewerage & Drainage Construction

Gas & Water Mains

Oil Pipelines

Road Underpasses

Bridge Abutments

Pipe Jacking Machine Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Kuwait

Turkey

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the Global Pipe Jacking Machine Market.

Available Customizations:

Global Pipe Jacking Machine Market report with the given Market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional Market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
- 1.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Formulation of the Scope
- 2.4. Assumptions and Limitations
- 2.5. Sources of Research
 - 2.5.1. Secondary Research
 - 2.5.2. Primary Research
- 2.6. Approach for the Market Study
 - 2.6.1. The Bottom-Up Approach
 - 2.6.2. The Top-Down Approach
- 2.7. Methodology Followed for Calculation of Market Size & Market Shares
- 2.8. Forecasting Methodology
 - 2.8.1. Data Triangulation & Validation

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, and Trends

4. VOICE OF CUSTOMER

5. GLOBAL PIPE JACKING MACHINE MARKET OUTLOOK

- 5.1. Market Size & Forecast

- 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Type (Soft Rock Pipe Jacking Machine, Slurry Balance Pipe Jacking Machine, Others)
 - 5.2.2. By Application (New Sewerage & Drainage Construction, Gas & Water Mains, Oil Pipelines, Road Underpasses, Bridge Abutments)
 - 5.2.3. By Region
- 5.3. By Company (2024)
- 5.4. Market Map

6. NORTH AMERICA PIPE JACKING MACHINE MARKET OUTLOOK

- 6.1. Market Size & Forecast
 - 6.1.1. By Value
- 6.2. Market Share & Forecast
 - 6.2.1. By Type
 - 6.2.2. By Application
 - 6.2.3. By Country
- 6.3. North America: Country Analysis
 - 6.3.1. United States Pipe Jacking Machine Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Type
 - 6.3.1.2.2. By Application
 - 6.3.2. Canada Pipe Jacking Machine Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Type
 - 6.3.2.2.2. By Application
 - 6.3.3. Mexico Pipe Jacking Machine Market Outlook
 - 6.3.3.1. Market Size & Forecast
 - 6.3.3.1.1. By Value
 - 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Type
 - 6.3.3.2.2. By Application

7. EUROPE PIPE JACKING MACHINE MARKET OUTLOOK

- 7.1. Market Size & Forecast
 - 7.1.1. By Value
- 7.2. Market Share & Forecast
 - 7.2.1. By Type
 - 7.2.2. By Application
 - 7.2.3. By Country
- 7.3. Europe: Country Analysis
 - 7.3.1. Germany Pipe Jacking Machine Market Outlook
 - 7.3.1.1. Market Size & Forecast
 - 7.3.1.1.1. By Value
 - 7.3.1.2. Market Share & Forecast
 - 7.3.1.2.1. By Type
 - 7.3.1.2.2. By Application
 - 7.3.2. United Kingdom Pipe Jacking Machine Market Outlook
 - 7.3.2.1. Market Size & Forecast
 - 7.3.2.1.1. By Value
 - 7.3.2.2. Market Share & Forecast
 - 7.3.2.2.1. By Type
 - 7.3.2.2.2. By Application
 - 7.3.3. Italy Pipe Jacking Machine Market Outlook
 - 7.3.3.1. Market Size & Forecast
 - 7.3.3.1.1. By Value
 - 7.3.3.2. Market Share & Forecast
 - 7.3.3.2.1. By Type
 - 7.3.3.2.2. By Application
 - 7.3.4. France Pipe Jacking Machine Market Outlook
 - 7.3.4.1. Market Size & Forecast
 - 7.3.4.1.1. By Value
 - 7.3.4.2. Market Share & Forecast
 - 7.3.4.2.1. By Type
 - 7.3.4.2.2. By Application
 - 7.3.5. Spain Pipe Jacking Machine Market Outlook
 - 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value
 - 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Type
 - 7.3.5.2.2. By Application

8. ASIA-PACIFIC PIPE JACKING MACHINE MARKET OUTLOOK

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Type

8.2.2. By Application

8.2.3. By Country

8.3. Asia-Pacific: Country Analysis

8.3.1. China Pipe Jacking Machine Market Outlook

8.3.1.1. Market Size & Forecast

8.3.1.1.1. By Value

8.3.1.2. Market Share & Forecast

8.3.1.2.1. By Type

8.3.1.2.2. By Application

8.3.2. India Pipe Jacking Machine Market Outlook

8.3.2.1. Market Size & Forecast

8.3.2.1.1. By Value

8.3.2.2. Market Share & Forecast

8.3.2.2.1. By Type

8.3.2.2.2. By Application

8.3.3. Japan Pipe Jacking Machine Market Outlook

8.3.3.1. Market Size & Forecast

8.3.3.1.1. By Value

8.3.3.2. Market Share & Forecast

8.3.3.2.1. By Type

8.3.3.2.2. By Application

8.3.4. South Korea Pipe Jacking Machine Market Outlook

8.3.4.1. Market Size & Forecast

8.3.4.1.1. By Value

8.3.4.2. Market Share & Forecast

8.3.4.2.1. By Type

8.3.4.2.2. By Application

8.3.5. Australia Pipe Jacking Machine Market Outlook

8.3.5.1. Market Size & Forecast

8.3.5.1.1. By Value

8.3.5.2. Market Share & Forecast

8.3.5.2.1. By Type

8.3.5.2.2. By Application

9. SOUTH AMERICA PIPE JACKING MACHINE MARKET OUTLOOK

9.1. Market Size & Forecast

9.1.1. By Value

9.2. Market Share & Forecast

9.2.1. By Type

9.2.2. By Application

9.2.3. By Country

9.3. South America: Country Analysis

9.3.1. Brazil Pipe Jacking Machine Market Outlook

9.3.1.1. Market Size & Forecast

9.3.1.1.1. By Value

9.3.1.2. Market Share & Forecast

9.3.1.2.1. By Type

9.3.1.2.2. By Application

9.3.2. Argentina Pipe Jacking Machine Market Outlook

9.3.2.1. Market Size & Forecast

9.3.2.1.1. By Value

9.3.2.2. Market Share & Forecast

9.3.2.2.1. By Type

9.3.2.2.2. By Application

9.3.3. Colombia Pipe Jacking Machine Market Outlook

9.3.3.1. Market Size & Forecast

9.3.3.1.1. By Value

9.3.3.2. Market Share & Forecast

9.3.3.2.1. By Type

9.3.3.2.2. By Application

10. MIDDLE EAST AND AFRICA PIPE JACKING MACHINE MARKET OUTLOOK

10.1. Market Size & Forecast

10.1.1. By Value

10.2. Market Share & Forecast

10.2.1. By Type

10.2.2. By Application

10.2.3. By Country

10.3. Middle East and Africa: Country Analysis

10.3.1. South Africa Pipe Jacking Machine Market Outlook

- 10.3.1.1. Market Size & Forecast
 - 10.3.1.1.1. By Value
- 10.3.1.2. Market Share & Forecast
 - 10.3.1.2.1. By Type
 - 10.3.1.2.2. By Application
- 10.3.2. Saudi Arabia Pipe Jacking Machine Market Outlook
 - 10.3.2.1. Market Size & Forecast
 - 10.3.2.1.1. By Value
 - 10.3.2.2. Market Share & Forecast
 - 10.3.2.2.1. By Type
 - 10.3.2.2.2. By Application
- 10.3.3. UAE Pipe Jacking Machine Market Outlook
 - 10.3.3.1. Market Size & Forecast
 - 10.3.3.1.1. By Value
 - 10.3.3.2. Market Share & Forecast
 - 10.3.3.2.1. By Type
 - 10.3.3.2.2. By Application
- 10.3.4. Kuwait Pipe Jacking Machine Market Outlook
 - 10.3.4.1. Market Size & Forecast
 - 10.3.4.1.1. By Value
 - 10.3.4.2. Market Share & Forecast
 - 10.3.4.2.1. By Type
 - 10.3.4.2.2. By Application
- 10.3.5. Turkey Pipe Jacking Machine Market Outlook
 - 10.3.5.1. Market Size & Forecast
 - 10.3.5.1.1. By Value
 - 10.3.5.2. Market Share & Forecast
 - 10.3.5.2.1. By Type
 - 10.3.5.2.2. By Application

11. MARKET DYNAMICS

- 11.1. Drivers
- 11.2. Challenges

12. MARKET TRENDS & DEVELOPMENTS

- 12.1. Merger & Acquisition (If Any)
- 12.2. Product Launches (If Any)

12.3. Recent Developments

13. COMPANY PROFILES

13.1. Herrenknecht AG

13.1.1. Business Overview

13.1.2. Key Revenue and Financials

13.1.3. Recent Developments

13.1.4. Key Personnel/Key Contact Person

13.1.5. Key Product/Services Offered

13.2. Akkerman Inc.

13.3. The Robbins Company

13.4. Terratec Ltd.

13.5. Iseki Poly-Tech, Inc.

13.6. China Railway Construction Heavy Industry Corporation Limited (CRCHI)

13.7. MTS Perforator GmbH

13.8. SELI Overseas S.p.A.

13.9. RASA Industries, Ltd.

13.10. Vermeer Corporation

14. STRATEGIC RECOMMENDATIONS

15. ABOUT US & DISCLAIMER

I would like to order

Product name: Pipe Jacking Machine Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented, By Type (Soft Rock Pipe Jacking Machine, Slurry Balance Pipe Jacking Machine, Others), By Application (New Sewerage & Drainage Construction, Gas & Water Mains, Oil Pipelines, Road Underpasses, Bridge Abutments), By Region, By Competition, 2020-2030F

Product link: <https://marketpublishers.com/r/P86291FD96F6EN.html>

Price: US\$ 4,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/P86291FD96F6EN.html>