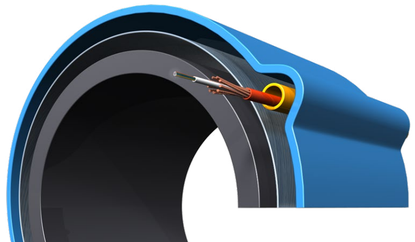
THE SOLUTION:

Digital pipeline infrastructure for preventive risk management and maximum transparency in the network

egeSmart:Data combines proven pipe system technology with intelligent sensor technology and digital data transmission. By continuously recording the temperature profile along the entire length of the pipeline, critical operating conditions can be precisely identified. This data provides valuable indications of leaks, unauthorised access or operational anomalies before they jeopardise network stability.

egeSmart:Data not only enables precise temperature measurements over long distances, but secure data transmission and use as a data or control cable. Operating conditions are recorded in real time and can be seamlessly integrated into existing control centres via cloud or SCADA systems.

This solution ensures that utility and waste management networks are future-proof – resilient, smart, and sustainable. For a secure infrastructure for current and future generations.



ABOUT EGEPLAST

Safety with egeplast's tested pipe systems

Pipelines are the backbone of modern infrastructure – and at the same time one of the most valuable assets of municipal and industrial network operators. Particularly in trenchless installation methods, where visual inspections cannot be performed after the installation, there are high quality requirements for the pipe systems.

egeplast offers pipe systems with integrated protection and monitoring functions that ensure documented safety both during installation and in operation. This gives planners, engineering firms, and network operators the assurance that they are investing in sustainable infrastructure that will retain its value over the long term – for 100 years.

egeplast – Future-proofed pipe systems

egeplast international GmbH
+49 2575 9710-0
info@egeplast.de

egeplast

www.egeplast.de/en

egs-2868 UK 04/26

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egeSmart:Data

Monitored pipe system for the protection of critical infrastructure – for people and the environment.

egeplast egeSmart:Data
Systems for the challenges of today and tomorrow

Today, underground pipeline networks face changing environmental and operational conditions. Climatic influences, urban densification and threats of third-party interference and manipulation are raising the bar for long-term integrity, monitorability and operational reliability of infrastructure pipelines.

With egeSmart:Data, the pipeline itself becomes an active component of a resilient infrastructure. This ensures long-term security of supply even under demanding conditions.

CHALLENGES FOR NETWORK INFRASTRUCTURE

Protection of critical infrastructure

Pipeline networks are a central component of critical supply infrastructure. Disruptions or failures have a direct impact on security of supply, public health and the functioning of local authorities and industry.

Third-party interference and manipulation

Unintended damage ('third-party damage') and deliberate manipulations can lead to significant operational and environmental risks. Early detection of such incidents is therefore essential.

Climate change

Rising ground and ambient temperatures are increasingly leading to uncontrolled heating of drinking water pipes and reservoirs in the network. This can directly compromise the microbiological stability of the resource.

Growing regulatory requirements

The EU drinking water directive (EU 2020/2184) legally require a risk-based approach across the entire infrastructure chain.

CONSEQUENCES FOR NETWORK OPERATIONS

Regardless of the medium being transported, continuous status information, early damage detection and transparent monitoring of pipeline systems are thus becoming increasingly important. This serves equally to the protection of resources as well as the long-term preservation of asset value. Monitored systems also enhance operational reliability and minimise downtime through the early identification of critical events.

YOUR BENEFITS AT A GLANCE

Continuous monitoring

The condition of the pipeline is continuously monitored, deviations detected, enabling timely targeted measures.

Compliance with regulatory requirements

The system supports the required risk-based approach in accordance with the European Drinking Water Directive.

Accurate and flexible fault location

Damage events are precisely localised, even beneath sealed or hard-to-access surfaces where conventional methods reach their limits.

Protection against external interference

Mechanical impacts or manipulation attempts are detected early on and can be assessed immediately.

Network transparency

Real-time data provides a reliable basis for decision-making regarding network operations and enhances security of supply.

Easy integration

Integration with existing SCADA or cloud systems enables seamless integration into existing processes.

Monitoring of long stretches

Pipeline sections of up to 16 km can be continuously monitored and centrally analysed. Depending on the project, even longer monitoring lengths can be achieved.

Multifunctional use

In addition to temperature monitoring, the system can also be used for secure data or signal transmission.

TECHNICAL DATA

Dimensions	OD 63 – 1,600 mm
SDR	SDR 17.6 – SDR 7.4
Pipe design	**Core pipe:** made of PE 100-RC
	Detection layer: with fibre-optic conductor, optionally with additional barrier layer
	Protective layer: made of PEplus
Applications	Drinking water | Wastewater | Gas
Delivery forms	Sticks (12/20/30 m, custom lengths on request) | Rings | Drums