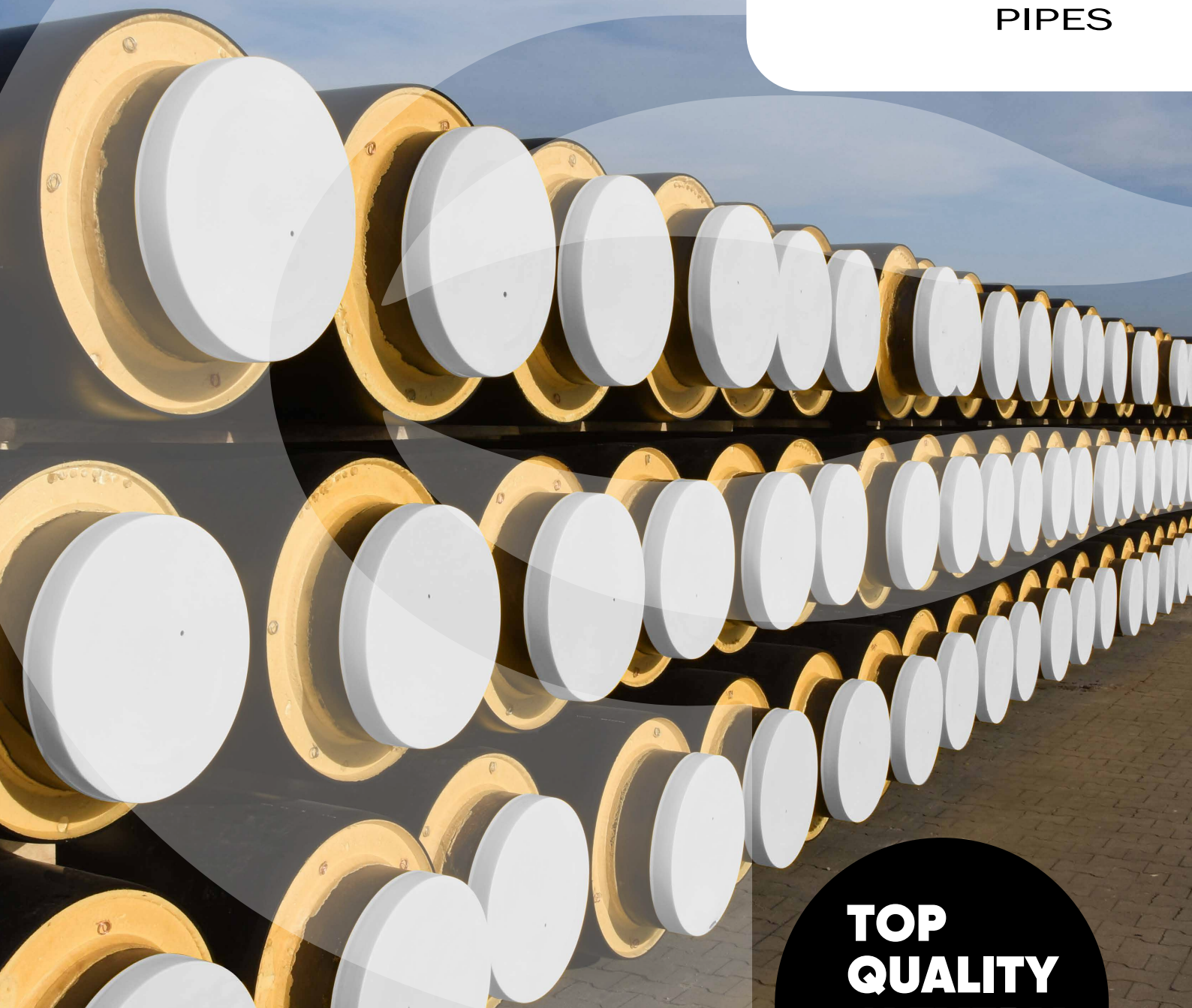


[www.radpolpipes.eu](http://www.radpolpipes.eu)

 **RADPOL**  
PIPES



**TOP  
QUALITY  
IN EVERY  
LAYER.**

# Pre-insulated pipe systems

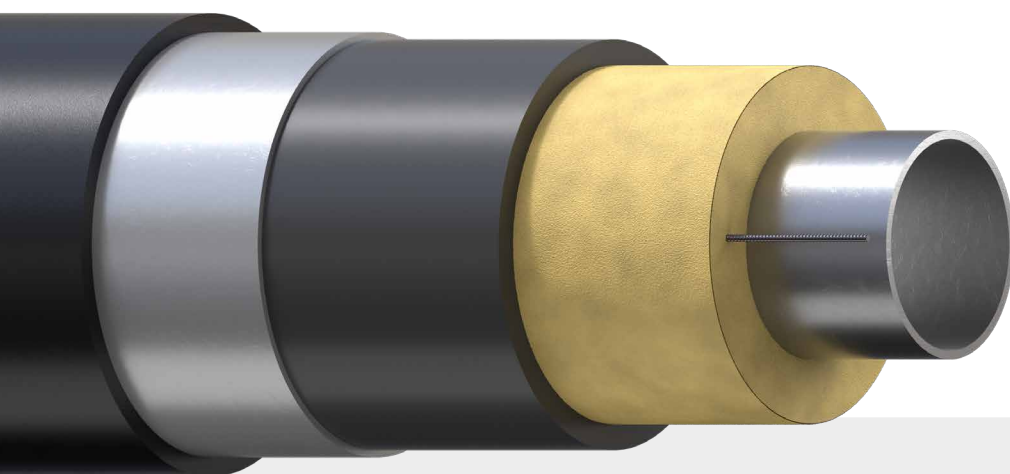
FOR DISTRICT HEATING, COOLING  
AND INDUSTRIAL APPLICATIONS

**IN MODERN INFRASTRUCTURE  
– FROM EXTENSIVE DISTRICT  
HEATING AND COOLING NETWORKS  
TO CRITICAL INDUSTRIAL  
INSTALLATIONS – THE PIPELINE  
IS A KEY COMPONENT.**

Once commissioned, it is expected to operate reliably for decades, without costly downtime or repair works.

Radpol Pipes is a manufacturer of complete pre-insulated pipe systems that meet the highest technical requirements in accordance with EN 253, EN 448 and EN 13941 standards.

**Our philosophy is based on future-oriented engineering:** innovative material solutions, precise insulation manufacturing processes, and an optimally designed protective casing configuration.



# Technical parameters and operating conditions

**Radpol Pipes pre-insulated systems can be used in district heating networks, cooling networks and industrial installations** – wherever there is no room for compromise in terms of quality and durability.

## District heating

**Systems designed for low heat losses and stable insulation performance over long-term operation.**

- PUR insulation thermal conductivity coefficient:  $\lambda \approx 0.0235 \text{ W/mK}$ ,
- continuous operating temperature: up to 120°C,
- short-term temperature: up to 140°C,
- service life exceeding 30 years (EN 253:2019+A1:2023),
- pre-insulated pipes available in lengths up to 16 m and diameters up to DN 1000 mm,
- pre-insulated fittings (bends, tees, valves, etc.) with diameters up to DN 1000 mm,
- possibility of using heat-shrink jointing systems with diameters up to DN 710 mm.

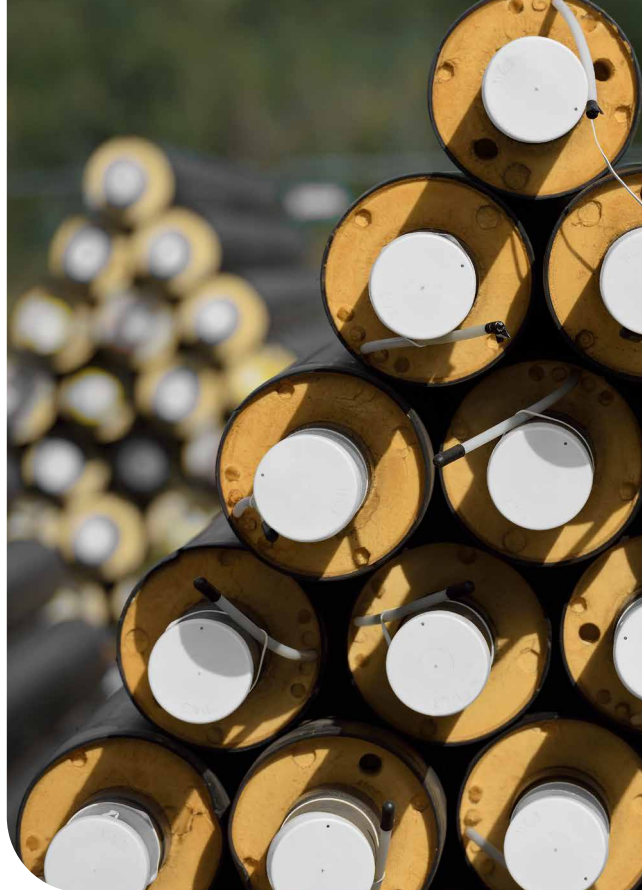
# Every layer matters

The Radpol Pipes pre-insulated pipe system is based on a multilayer design in which each layer performs a clearly defined technical function.

Our pre-insulated pipe system consists of:

- **service pipe** – P235GH steel (optionally other steel grades or PE), responsible for the safe transport of the medium,
- **thermal insulation** – PUR foam blown with cyclopentane,
- **protective casing** – made of HDPE.

The Radpol Pipes system is complemented by fittings, jointing systems, valves and alarm systems, all designed as components of a single, fully compatible system.



## Cooling

**Sustainable, energy-efficient pre-insulated systems designed to meet the needs of modern cities.**

- PUR insulation thermal conductivity coefficient:  
 $\lambda \approx 0.019 \text{ W/m}\cdot\text{K}$ ,
- operating temperature range: down to  $-60^{\circ}\text{C}$ ,
- low moisture absorption and long-term stability of performance,
- service life exceeding 30 years (EN 253:2019+A1:2023),
- pre-insulated pipes available in lengths up to 16 m and diameters up to DN 1000 mm,
- pre-insulated fittings (bends, tees, valves, etc.) with diameters up to DN 1000 mm,
- possibility of using heat-shrink jointing systems with diameters up to DN 710 mm.



## Industrial applications

**Systems designed for continuous operation, resistant to environmental conditions and process-related requirements.**

- Parameters individually tailored to the specific requirements of each project.

# Innovative solutions

Depending on the operating conditions of the pipeline and the investor's requirements, Radpol Pipes systems can be configured using our innovative technologies, which extend their functionality.



**EVOprotect**

## EVOprotect®

### New generation diffusion barrier

**EVOprotect® is a solution that sets a new standard in the design and performance of pre-insulated pipe systems.**

It combines advanced material engineering with proven technical efficiency, delivering above-average durability and thermal insulation properties for modern district heating networks. As a complete pre-insulated pipe system incorporating a polymer diffusion barrier, EVOprotect® introduces a qualitative improvement in energy efficiency and long-term system durability.

**EVOH** (ethylene-vinyl alcohol copolymer) is a high-performance barrier material, engineered with an ordered molecular structure that provides excellent resistance to gas diffusion, thereby protecting the polyurethane (PUR) foam against degradation. The EVOH barrier is integrated between two layers of the HDPE protective casing, without the need to increase its thickness.

## Benefits



**Reduction of heat losses by up to 15%** during the first 10 years of operation,



The system maintains **stable insulation properties for decades**,



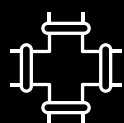
Reduced heat transmission losses directly translate into lower energy demand and **reduced CO<sub>2</sub> emissions**,



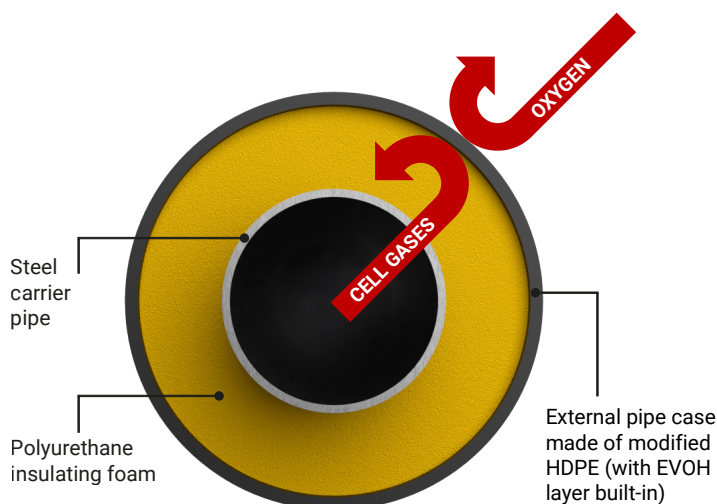
**Limitation of gas diffusion** into the PUR insulation,



**Service life exceeding 30 years** (EN 253:2019+A1:2023).



A key distinguishing feature of the EVOprotect® system is the **possibility of applying the EVOH diffusion barrier not only in straight pipe sections, but also in fittings and jointing systems.**



# GreenID®

## circular economy technology

**We believe that innovation and environmental responsibility can – and should – go hand in hand.**

**That is why we developed GreenID®:** pre-insulated pipes with a protective casing made of HDPE derived from our own recycling processes.

Our approach is a well-structured closed-loop system in which polyethylene waste generated during in-house production becomes a raw material for manufacturing new, fully functional protective casings for GreenID® pre-insulated pipes.

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**GREENID**



COMPLIANT WITH  
**EN 253**

## Benefits



**Supports ESG policy objectives**, increasing recognition among investors and local communities,



HDPE sourced from a **controlled in-house recycling process**,



**No impact** on the mechanical performance of the system,



**Reduces CO<sub>2</sub> emissions** by up to 1.5 tonnes for each tonne of HDPE used, compared to virgin material,



**Service life exceeding 30 years**  
(EN 253:2019+A1:2023).



# UVprotect Color<sup>®</sup>

## UV resistance and protection against environmental conditions



The UVprotect Color<sup>®</sup> pre-insulated pipe system is dedicated to the construction and modernisation of all types of above-ground pipelines that require full protection against temperature variations of the transported media.

UVprotect Color<sup>®</sup> pipes are equipped with a casing made specially modified HDPE resistant to UV radiation.

They are also resistant to mechanical damage, chemical agents and changes in ambient temperature, while ensuring full tightness for a service life of at least 30 years.

UVprotect Color<sup>®</sup> is an excellent solution for municipal installations (district heating, steam and cooling networks) as well as for industrial facilities involved in the transport of hydrocarbons, condensates, water, oils and other chemical media.

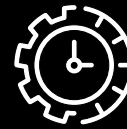
### Benefits



**HDPE casing resistant to UV radiation** and atmospheric conditions,



**Possibility of integration** with underground networks,



**Operational resistance** of at least 30 years,



**service life exceeding 30 years** (EN 253:2019 +A1:2023).



# Quality, standards and compliance



**High quality accompanies us at every stage of production** – from design, through the careful selection of raw materials and components, the choice of trusted suppliers, to rigorous testing and compliance with the highest standards.



**We operate in accordance with management systems** compliant with EN ISO 9001, EN ISO 14001, ISO 45001 and EUROHEAT & POWER guidelines, ensuring that the quality of our products is maintained at the highest and consistently stable technical level.



**Consideration of long-term stability of performance parameters** is an integral part of our design and manufacturing approach.

## Technical support and cooperation

**Radpol Pipes supports investors, designers and contractors at the stages of solution selection, design and project execution.**

Cooperation includes technical consultancy, system configuration tailored to project requirements, and support during the implementation phase.





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