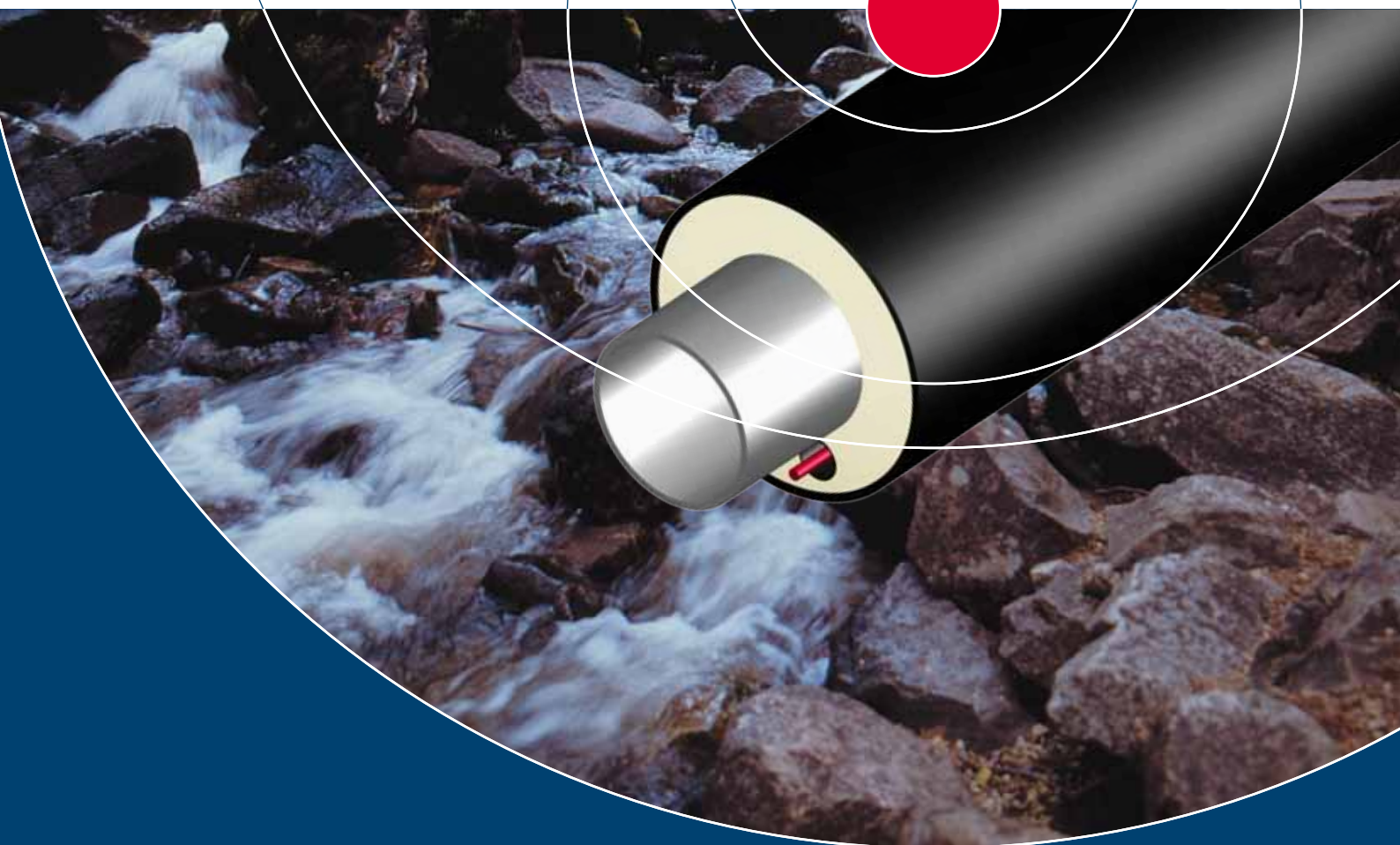


Safest way between two points



Containment pipe for leak detection in chemical and petrochemical pipelines

SafePipe™

- keeps control of your pipelines

- Combines key benefits from two technologies
- Enables you to detect and monitor leaks before major damage occurs
- Prevents small leaks developing into major spills
- Helps protect your company's good reputation
- Ensures that sensor cables are easy to access, maintain and upgrade
- You can use identical inventory and equipment for installations above and below ground
- Easy to install, saving on time, manpower and money

Impervious HDPE casing that keeps any leakage inside the pipe, hence functioning as an environmental membrane

PUR foam

Service pipe of any material

Perforated plastic tube for sensor cable that detects any leaks

If your business operations involve transporting chemical or petrochemical liquids via pipe, it's important to know if and when anything goes wrong. And to minimise the effects if it does.

LOGSTOR expertise with pre-insulated pipe systems makes it easy to place sensor cables securely inside the tracer pipe. These monitor what's happening at any given time – so you can be fully informed if anything goes amiss, as well as prevent any minor problems developing into potentially crucial or critical situations.

Playing it safe

Using *SafePipe* makes it considerably easier to comply with the full palette of safety and environmental legislation. There are stringent requirements associated with chemical and petrochemical installations, and pipeline transmission systems must equal or exceed these.

SafePipe enables you to detect any problem and then pinpoint the exact location of whatever is the source. At the same time, you can be sure that any leakage is safely contained within the HDPE outer casing.

Together, these key features mean you can take effective action before any spill:

- puts a big hole in your operating and maintenance budgets
- has an unfortunate impact on both the environment and your company's good name

We supply the complete leak containment pipe system, ready for installation of the specified sensor cable and system.

Complete compatibility

The unique design of *SafePipe* enables you to easily install sensor cables and monitoring systems from e.g. TraceTek®.

The system includes joint kits, fittings and access points for cable connections. At the same time it can also include heating cables and other alarm and monitoring systems, if required.

Quality-managed production

LOGSTOR and AVA Systems proactively address both quality and environmental concerns from component manufacture to finished installation. ISO 9001 and ISO 14001 standards are the basis for the manufacture of all LOGSTOR pipes and components.





Pure protection - environmental membrane

The impervious HDPE outer casing of *SafePipe* serves as an extremely effective environmental membrane – and prevents small problems developing into big ones. The casing is 100% watertight and completely impervious to hydrocarbons or virtually any liquid.

The exact location of any leakage is detected almost immediately by the sensor equipment before it can

reach a volume where environmental damage might result. This means it can be kept from getting worse, and be dealt with rapidly using standard hazard control procedures.

At the same time, the results of any leakage remains inside the HDPE casing. This prevents a leak developing into a large spill that might damage the environment.

Works both ways

A completely impervious high-density polyurethane (HDPE) pipe casing is a key feature of all LOGSTOR pipe systems. It is designed to keep out the elements when installed above ground and avoid any seepage from the surrounding soil when placed below ground.

This casing is just as effective at keeping things in. This means it is ideal for containing any leaks that might occur in pipes used for transporting chemicals and petrochemicals, both above ground and below..





How it works

SafePipe provides you with an easy-to-implement, all-in-one leak detection and containment solution consisting of

- a durable, well-protected service pipe to transport the liquid
- the extremely efficient layer of insulation consisting of PUR serves at the same time as a perfect material for keeping the medium pipe in the center of the outer casing during the entire lifetime of the pipe
- an impervious HDPE outer casing that serves as an environmental membrane, making sure that any leaked liquids remain within the *SafePipe* construction
- a robust, uncrunchable channel in which sensor cables and other associated monitoring equipment are easy to install and pull

Keeping the distance

The unique polyurethane (PUR) cellular foam used in all LOGSTOR pipe systems fills the space between the outer casing and inner service pipe, keeping them at a fixed distance from each other. This prevents usage of traditional internal supports and fixtures, which get in the way of the sensor cables, thereby making it difficult to install and maintain them.

The closed-cell foam has a resilient structure as well as supremely effective insulation properties. This prevents water from entering and condensation from forming throughout the service life of the pipe. Bottom line: The space is kept clean and dry, avoiding costly, time-consuming false alarms, besides providing corrosion protection for the service pipe.

The plastic tube for the sensor cable is cast into the pipe during manufacture, and ensures a robust, unobstructed pulling channel that is at the same time perforated to let in a potential future leak.



140,000 km and counting

LOGSTOR is the world's pre-eminent supplier of energy efficient pre-insulated pipe systems. These are the safest, most cost-effective way of transporting liquids and gases with temperatures ranging from -200°C to 250°C by pipe, with the absolute minimum of energy loss.

Our current production amounts to more than 10,000 km per year - and counting.

*In addition to *SafePipe*, our systems are standard equipment in district heating and cooling, oil and gas installations, marine applications and industry in general.*

ISO 9001 and ISO 14001 standards are the basis for the manufacturer of all LOGSTOR pipes and components.

More information at www.logstor.com



Best of two worlds

SafePipe enables you to benefit from the combined technology, insight and experience available from the best suppliers in two different fields - TraceTek leak detection technology and LOGSTOR pipe systems.

Together, correctly installed, they provide a supremely reliable, integrated solution for transportation of liquids and preventing spills of all kinds from chemical and petrochemical pipe systems.



TraceTek® technology

The TraceTek Leak Detection and Locating technology was originally developed by Raychem Corporation in the early 1980s. In the beginning the focus was on water-based liquids. Soon, the focus was extended to include oil-based products, or liquid hydrocarbons.

Where to use

SafePipe is ideal for transporting

- petrol/gasoline, diesel, jet fuel, crude oil, lube oil and other hydrocarbon-based liquids
- organic solvents
- strong acids and bases and other hazardous fluids that contain water
- contaminated water and polluting liquids in general



in a safe, effectively monitored way that makes sure any spills are kept securely within the environmental membrane (HDPE) that forms the outer casing of the entire pipe from start to end.

It is Buyer's sole responsibility to ensure that the use and installation of *SafePipe* complies with applicable legislation.

LOGSTOR / AVA Systems Nordic will at all times to the extent reasonably commercially possible assist the Buyer in matters related to the Product, however the responsibility of the legal use of the product will at all times be Buyer's sole responsibility.

